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     (FILE 'USPATFULL' ENTERED AT 17:26:41 ON 10 JAN 2003)
                SAVE ALL L10017038/L
L8         12927 S NICOTINIC OR NICOTINAMIDE
L9          4928 S RIBOFLAVIN
L10          906 S L8 (1S) L9
L11            4 S L8/AB AND L9/AB
L12         1209 S PRURITUS
L13            0 S L11 AND L12
L14          906 S L8 (1S) L9
L15            0 S L14 (3S) L12
L16            3 S L14 AND L12
L17           13 S L8 (1S) L12
L18            0 S L9 (1S) L12
L19           31 S L9 AND L12
L20            0 S L19 AND L17
L21           66 S L8 AND L12
L22            6 S L19 AND L21
L23            6 FOCUS L22 1-

=> save l8-
ENTER NAME OR (END):l10009225/l
L# LIST L8- HAS BEEN SAVED AS 'L10009225/L'
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L9 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1972:568642 CAPLUS
DOCUMENT NUMBER: 77:168642
TITLE: Riboflavine and betamethasone preparations for prevention and treatment of photoinduced skin disorders
INVENTOR(S): **Giraux, Georges Louis**
SOURCE: Fr. Demande, 7 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2096712		19720331	FR 1970-23957	19700629

AB The title prepns. contain one or more of the B vitamins and a suitable steroid. E.g., a compn. contains; riboflavine 8, nicotinamide 70, betamethasone 17-valerate 120 mg, perfume and 150 ml excipient.

(non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5912272		19990615	
	WO 9526182		19951005	
APPLICATION INFO.:	US 1996-718591		19961223	(8)
	WO 1995-EP1118		19950324	
			19961223	PCT 371 date
			19961223	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1994-4410238	19940325

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Henley, III, Raymond
LEGAL REPRESENTATIVE: Sprung Kramer Schaefer & Briscoe
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
LINE COUNT: 420
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=>

L23 ANSWER 1 OF 6 USPATFULL

SUMM Vitamin B3 is considered by most to be the major B vitamin required for a healthy existence. Indeed, the U.S. Food and Drug Administration has assigned Vitamin B3 its highest MAC rating of 20 milligrams per day for an adult. This contrasts with Vitamin B1 (thiamin Hcl.) which the FDA has assigned a rating of 1.5 mg. daily and Vitamin B2 (**riboflavin**) at 1.7 mg. daily.

SUMM Most vitamin formulas supply Vitamin B3 as niacinamide. However, niacinamide does not have the circulatory benefits of niacin, (**nicotinic** acid) although niacin is converted into niacinamide in the brain to aid its function.

SUMM The ability of methyl nicotinate to carry into the body substantial quantities of other nutrients is quite evident when a considerable amount of **riboflavin** is present in a formula that is applied to the skin. The ratio of the **riboflavin** may be three parts to one of the methyl nicotinate. When applied to some area of the body rather distant from the kidneys, for instance, the shoulder, I have found the action is quite evident, as the urine emerges from the bladder with a strong yellow color reflecting the presence of the powerful yellow color of **riboflavin**.

SUMM The present invention provides a system for relieving muscular pain and a method for transdermal delivery of vitamins, minerals and other nutrients. The present invention is directed to compositions containing methyl nicotinate for dermal application. The compositions are useful as muscle relaxants, muscular pain relievers, and to stimulate capillary blood circulation in the human body. When various vitamins, minerals and other nutrients are added to the compositions, methyl nicotinate acts as a carrier and provides a means for promoting their transdermal delivery. The addition of relatively large amounts of **riboflavin** and cyanocobalamin to the compositions of the present invention acts further to stimulate hair growth and to aid in the return of natural pigmentation to the hair.

SUMM For applications in healing the skin, including use in the treatment of acne and eczema the composition preferably includes between about 2 percent and about 15 percent aloe vera by weight. In the preferred formulation the composition is comprised of aloe vera to the extent of about 4 percent. In other applications the composition is preferably comprised of between about 0.01 percent and about 1 percent by weight of vitamins and minerals selected from the group consisting of thiamin, **riboflavin**, pyridoxine, panthenol, folic acid, cyanocobalamin, para aminobenzoic acid, zinc, magnesium, manganese, chromium, selenium, and biotin. The active components are preferably applied in a liquid carrier of distilled water or a mixture of ten to twenty-five percent alcohol in water.

SUMM Methyl nicotinate is a highly active form of the B Vitamin **nicotinic** acid or niacin (3-pyridinecarboxylic acid). **Nicotinic** acid is known to have marked pharmacological activity in humans, including the nitroid reaction which is similar to the effects of histamine. Shortly after systemic administration of **nicotinic** acid, there is a marked flushing of the face, neck and arms due to transient vasodilatation. The vasodilatation results in increased peripheral blood flow and a rise in cutaneous temperature.

SUMM It is one of the surprising discoveries of the present invention that methyl nicotinate when combined with various vitamins, minerals and other nutrients, acts as a facilitator for the transdermal delivery of these active substances through the skin, where they are rapidly absorbed into the bloodstream. Such transdermally delivered vitamins

include **riboflavin**, cyanocobalamin, and the natural emollient, aloe vera. Also transdermally delivered are the trace elements selenium, manganese, chromium and zinc. When the vitamin **riboflavin** is incorporated into a diluent containing methyl nicotinate and applied to the skin covering the shoulder, I found that the urine later produced is bright yellow, indicating that the **riboflavin** had been transdermally delivered into the bloodstream.

SUMM I have further discovered that a composition comprising methyl nicotinate, all of the B vitamins, with relatively high levels of **riboflavin** and cyanocobalamin, plus the trace elements chromium, selenium, and zinc acts to stimulate hair follicles. This results in increased hair growth and the restoration of pigmentation of the hair. When applied to the skin of the face and scalp for a period of approximately three or four months, loss of hair was reduced and a substantial amount of hair growth returned to areas of the head from which hair had ceased to grow. In addition, the composition caused the natural pigmentation of the hair to return in some, but not all, areas.

DETD

Thiamin Hal	4.5	milligrams
Riboflavin	10.0	milligrams
Methyl Nicotinate	30.0	milligrams
Pyridoxine Hal	60.0	milligrams
dl Panthenol	150.0	milligrams
Folic Acid	6.0	milligrams
Cyanocobalamin	15.0	milligrams
PABA	46.0	milligrams
Zinc (gluconate)	1.65	milligrams
Magnesium (citrate)	1.0	milligrams
Manganese (gluconate)	1.0	milligrams
Chromium (picolinate)	3.0	micrograms
Selenium (selenomethionine)	600.0	micrograms
Aloe vera	3.0	grams
d-Biotin	5.0	micrograms

DETD The concentration of the active components can be varied widely, but preferably remains within 20-fold of the concentrations specified in the preferred formulation. However, an increase of the methyl nicotinate level by more than 5-fold tends to produce a rather pronounced **pruritus** (itching of the skin).

CLM What is claimed is:

1. A transdermal nutrient delivery composition comprising, in a liquid, between about 0.025 percent and about one percent methyl nicotinate by weight and between about 0.01 percent and about one percent by weight of vitamins and minerals selected from the group consisting of thiamin, **riboflavin**, pyridoxine, panthenol, folic acid, cyanocobalamin, para aminobenzoic acid, zinc, magnesium, manganese, chromium, selenium, and biotin.

8. A skin application substance comprising between about 0.025 percent and about one percent methyl nicotinate and at least about 0.01 percent vitamins and minerals selected from the group consisting of thiamin, **riboflavin**, pyridoxine, panthenol, folic acid, cyanocobalamin, para aminobenzoic acid, zinc, magnesium, manganese, chromium, selenium, and biotin by weight in a liquid.

11. A skin application substance according to claim 10 further comprising by weight between about 0.02 percent and 0.05 percent vitamins and minerals selected from the group consisting of

riboflavin, cyanocobalamin, and selenium.

15. A medicating composition for dermal application comprising methyl nicotinate present to the extent of between about 0.025 percent and about one percent and at least about 0.01 percent vitamins and minerals selected from the group consisting of thiamin, **riboflavin**, pyridoxine, panthenol, folic acid, cyanocobalamin, para aminobenzoic acid, zinc, magnesium, manganese, chromium, selenium, and biotin by weight in a liquid substance.

16. A medicating composition according to claim 15 further comprising between about 0.01 percent and about one percent vitamins and minerals selected from the group consisting of thiamin, **riboflavin**, pyridoxine, panthenol, folic acid, cyanocobalamin, para aminobenzoic acid, zinc, magnesium, manganese, chromium, selenium, and biotin.

ACCESSION NUMBER:	96:19100 USPATFULL		
TITLE:	Compositions for the transdermal delivery of nutrients		
INVENTOR(S):	Patrick, Jay, 14 Morgan, Irvine, CA, United States 92718		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5496827		19960305
APPLICATION INFO.:	US 1994-275437		19940715 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Dees, Jose G.		
ASSISTANT EXAMINER:	Carr, Deboreh D.		
LEGAL REPRESENTATIVE:	Thomas, Charles H.		
NUMBER OF CLAIMS:	17		
EXEMPLARY CLAIM:	1		
LINE COUNT:	533		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 2 OF 6 USPATFULL

SUMM A systemic vitamin A derivative for the treatment of nodular acne, known as isotretinoin, is commercially available under the name ACCUTANE.RTM., from Roche Laboratories in Nutley, N.J. It has been found that treatment using isotretinoin can clear up as much as 85 percent of the acne over a 4 to 6 month period. [Id.]. Also, the patient's condition tends to improve even after the treatment has ceased. Unfortunately, side effects often result from treatment using isotretinoin, and patients need to be monitored carefully. Monthly testing of the patient's liver, lipids and glucose is necessary to monitor the response to isotretinoin. The side effects are often mucocutaneous: cheilitis (dry, blistering lips), dry eyes or nose, eye irritation, **pruritus**, epistaxis (nosebleed), mild alopecia (hair loss), and some photosensitivity. [Id.]. Furthermore, isotretinoin is teratogenic, and therefore posses a serious risk of causing birth defects in pregnant women. Birth defects such as craniofacial, cardiac, and central nervous system abnormalities may result from even small amounts of isotretinoin taken over short periods of time. Thus, doctors administering this treatment often require females to take effective contraception prior to, during, and after treatment. [Roche Laboratories Inc., Important Information Concerning Your Treatment with Accutane, 6th ed., (1996)].

SUMM Another embodiment of the pharmaceutical composition also has at least one of a vitamin C source, burdock root, yellow dock root, horsetail extract, a catechin-based composition, a vitamin B.sub.1 source, a vitamin B.sub.2 source, a vitamin B.sub.3 source, a vitamin B.sub.5 source, and a vitamin E source, all in an amount sufficient to facilitate maintenance of skin cells. In a preferred embodiment, the

vitamin C source is ascorbic acid or ascorbate, the catechin-based composition is a proanthanol or proanthocyanidin, the vitamin B.sub.1 source is thiamin, the vitamin B.sub.2 source is **riboflavin**, the vitamin B.sub.3 source is niacinamide, the vitamin B.sub.5 source is pantothenic acid, and the vitamin E source is a sulfate or succinate vitamin E complex. In a more preferred embodiment, the vitamin C source is calcium ascorbate present in about 1 to 30 weight percent, the burdock root is present in about 1 to 30 weight percent, the yellow dock root is present in about 1 to 20 weight percent, the horsetail extract is present in about 1 to 20 weight percent, the catechin-based composition is proanthocyanidin present in about 0.1 to 15 weight percent, the niacinamide is present in about 0.05 to 5 weight percent, the pantothenic acid is present in about 0.05 to 5 weight percent, the **riboflavin** is present in about 0.05 to 5 weight percent, the thiamin is present in about 0.05 to 5 weight percent and the vitamin E source is vitamin E succinate present in about 1 to 30 weight percent.

SUMM The present invention also optionally includes several vitamin B sources. Vitamin B.sub.1, also commonly known as thiamine, aids carbohydrate metabolism, as well as the growth and maintenance of healthy skin. Both vitamin B.sub.2 and B.sub.3 are involved in tissue repair. Vitamin B.sub.2, also commonly known as **riboflavin**, is involved in both the protein and the liquid metabolism necessary to rebuild damaged skin tissues. Moreover, Vitamin B.sub.3 acts as a vasodilator, increasing the blood flow to the skin and other tissues. Vitamin B.sub.3 includes several vitamin B complexes, such as niacin, **nicotinic** acid, niacinamide, and **nicotinamide**.
Preferably, niacinamide is used in the present invention. Vitamin B.sub.5 complex also aids in several metabolic functions. All of the above vitamin B complexes also enhance the effectiveness of vitamin B.sub.6 in treating the skin. Preferably, the B.sub.5 source is pantothenic acid. Each of these vitamin B complexes may be found in the present pharmaceutical composition in about 0.05 to 15 weight percent, preferably about 0.2 to 5 weight percent, and more preferably about 0.3 to 3 weight percent. A unit dose of the above vitamin B complexes is typically about 1 mg to 50 mg, preferably about 1.5 mg to 35 mg, and more preferably about 2 mg to 20 mg.

DETD

INGREDIENTS	MG PER	PERCENT BY WEIGHT	CHEMICAL OR SCIENTIFIC NAME
Vitamin E Succinate (63.1%)	158.5	13.4%	D-alpha tocopheryl acid succinate
L-Lysine Hcl (80.0%)		13.2%	L-Lysine hydrochloride
Calcium Ascorbate (81.0%)	154.3	13.0%	Calcium ascorbate
Burdock Root		12.7% 150.0	Arctium lappa
Yellow Dock		10.6% 125.0	Rumex crispus polygonacae
L-Proline		10.6% 125.0	L-Proline
Horsetail extract (Silica)	100.0		

8.4%
Equisetrum arvense
Magnesium Oxide (60.0%)
7.0%
Magnesium oxide
Zinc Ascorbate (15.0%)
2.1%
Zinc ascorbate
Vitamin B.sub.6 (Pyridoxine HCL)
15.1 1.3%
Pyridoxine hydrochloride
(82.7%)
Grape Seed Extract
1.1%5
Proanthocyanidins
Vitamin B.sub.3 (Niacin)
12.5
1.1%
Niacinamide
Beta Carotene (yields 1,250
10.0
0.9%
Beta carotene
IU per tablet)
Selenomethionine (0.5%)
0.8%
L-selenomethionine
Biotin (1.0%) 0.6% 7.5
Biotin
Vitamin B.sub.5 (91.7%)
0.6%
Pantothenic Acid
Vitamin B.sub.2 (**Riboflavin**)
6.3
0.5%
Riboflavin
Vitamin B.sub.1 (Thiamine)
6.3
0.5%
Thiamine
CHROMEMATE CHROMIUM GTF .TM.
6.3 0.5%
Chromium polynicotinate
(0.2%) Chromium organically bound
to **nicotinic** acid (niacin,
vitamin B.sub.3)
Vitamin A Palmitate (yields
2.5
0.2%
Vitamin A palmitate
1,250 IU per tablet)
Chromium Picolinate (12.0%)
0.1
0.01%
Chromium picolinate

CLM What is claimed is:

10. The pharmaceutical composition of claim 9, wherein the vitamin C source comprises ascorbic acid or ascorbate, the catechin-based composition comprises a proanthanol or proanthocyanidin, the vitamin B.sub.1 source comprises thiamin, the vitamin B.sub.2 source comprises **riboflavin**, the vitamin B.sub.3 source comprises niacinamide, the vitamin B.sub.5 source comprises pantothenic acid, and the vitamin E source comprises a sulfate or succinate vitamin E complex.

11. The pharmaceutical composition of claim 10, wherein the vitamin C source is calcium ascorbate present in about 1 to 30 weight percent, the burdock root is present in about 1 to 30 weight percent, the yellow dock root is present in about 1 to 30 weight percent, the horsetail extract is present in about 1 to 20 weight percent, the catechin-based composition is proanthocyanidin present in about 0.1 to 15 weight percent, the niacinamide is present in about 0.05 to 5 weight percent, the pantothenic acid is present in about 0.05 to 5 weight percent, the **riboflavin** is present in about 0.05 to 5 weight percent, the thiamin is present in about 0.05 to 5 weight percent and the vitamin E source is vitamin E succinate present in about 1 to 30 weight percent.

ACCESSION NUMBER:	1999:121419 USPATFULL		
TITLE:	Pharmaceutical compositions and methods for treating acne		
INVENTOR(S):	Murad, Howard, 4316 Marina City Dr., Marina del Rey, CA, United States 90292		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5962517		19991005
APPLICATION INFO.:	US 1998-16800		19980130 (9)
	NUMBER		DATE
PRIORITY INFORMATION:	US 1997-36825P		19970131 (60)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	MacMillan, Keith D.		
ASSISTANT EXAMINER:	Kim, Vickie		
LEGAL REPRESENTATIVE:	Pennie & Edmonds LLP		
NUMBER OF CLAIMS:	21		
EXEMPLARY CLAIM:	1		
LINE COUNT:	960		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 3 OF 6 USPATFULL

SUMM When the Gram-positive bacilli are reduced or disappear in vagina, vaginal pH value rises and disturbance of vaginal bacterial flora results from abnormal increases of Gram-negative bacilli, Gram-positive cocci and Gram-negative cocci, which can cause harm to the human body and lead to a range of diseases. The most typical condition resulting from altered vaginal flora is bacterial vaginosis (BV). BV is characterized by the reduction or even disappearance of Lactobacillus and other Gram-positive bacilli in the vagina, accompanied by decreased acidity (pH value>4.6) in the vagina, and abnormal increases of such bacteria as Gram-negative bacilli including Gardnerella, Bacteroides and motile-curved bacilli; Gram-negative cocci such as Veillonella; and Gram-positive cocci such as Streptococcus. Such changes in the bacterial flora can cause vaginal secretions to exhibit an unpleasant odor, and may be associated with **pruritus** of vulva, and symptoms. In addition, BV may also be related to IUGR [1], PTL, PROM [2], abortion, and obstetric infections such as chorio-amnionitis, puerperal endometritis, vaginal wall phlegmon after hysterectomy, female upper genital tract infection (salpingitis), and urinary infection, etc. [3]. A high rate of morbidity is associated with vaginal bacterial flora disturbance. According to one report, about 45% or more vaginitis cases result from disturbance of vaginal bacterial flora [3], and 4-15% of American female students in universities suffer from bacterial vaginosis [4], which has led to serious compromise to health and quality of life.

DETD Ms. Jiang, female, aged 30. The vaginal secretions of hers had exhibited

unpleasant fish-odor, accompanying **pruritus** of vulvae for 2 years. After having born a child two years ago this patient had begun suffering from the increased quantity of vaginal secretions, which had exhibited unpleasant fish-odor especially after intercourse, and from **pruritus** of the vulvae which was so severe sometimes that she could not fall asleep. Having been tested and reported "neuplasma positive" in one hospital, she had been treated with several antibiotics which could relieve her symptoms temporarily. But the symptoms usually relapsed after the menstruation. She had also used various vaginal douches, and the symptoms relieved temporarily and then relapsed after stopping treatments. The present inventor found that there were a great mass of bacteria in Gram smears of the vaginal secretions of the patient and most of them were Gram negative bacilli and Gram negative cocci, there was few Gram positive bacilli and a few of white blood cells. The pH values of the vaginal secretions of this patient was 5.4. Diagnosed as "bacterial vaginosis" by the present inventor, this patient was treated with the composition of this invention, which contained 12% (W/V) of lactose and the pH value was 5.0. The drug was intravaginally administered, 3 ml for each time, once a day. After the treatment continued successively for three days, the symptoms of the patient relieved significantly and the pH value of the vaginal secretions decreased to 4.6. The Gram smears showed a lot of Gram-negative bacilli, Gram negative cocci, but the quantity of Gram positive cocci increased and many of Gram positive bacilli appeared.

DETD

Fructooligosaccharide 14.0% (W/V)
Histidine 100 ppm
Methionine 50.0 ppm
Riboflavin 0.2 ppm
Thiamine 0.2 ppm
Nicotinic acid 0.2 ppm
Calcium pantothenate 0.2 ppm
Xanthan gum 1.8% (W/V)
Distilled water q.s.
pH 5.5

DETD

Dextrin 10.0% (W/V)
Glucose 2.0% (W/V)
Histidine 100 ppm
Methionine 50.0 ppm
Riboflavin 0.2 ppm
Thiamine 0.2 ppm
Nicotinic acid 0.2 ppm
Calcium pantothenate 0.2 ppm
Xanthan gum 1.0% (W/V)
pH 6.0

ACCESSION NUMBER: 2002:217253 USPATFULL
TITLE: Method for promoting the growth of gram-positive bacilli and increasing the acidity in vagina
INVENTOR(S): Zeng, Zhongming, Shenzhen, CHINA
PATENT ASSIGNEE(S): Shanghai Jiao Da Onlly Co., Ltd., Shanghai, CHINA (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6440949	B1	20020827
APPLICATION INFO.:	US 2000-578177		20000524 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1998-CN278, filed on 24 Nov 1998

	NUMBER	DATE

PRIORITY INFORMATION: CN 1997-1227 19971124
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Fonda, Kathleen K.
ASSISTANT EXAMINER: Maier, Leigh C.
LEGAL REPRESENTATIVE: Darby & Darby
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 1062
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 4 OF 6 USPATFULL

SUMM The present invention particularly relates to active compounds and formulations, in particular for topical use, which are used for prophylaxis and treatment of hyperreactive skin predisposed to dermatitis, and of deficient hypoactive skin and for prophylaxis and treatment of the manifest dermatoses mentioned under I. to XIII., such as, for example, atopic dermatitis, neurodermatitis, atopic eczema and seborrhoeic dermatitis, photoinduced dermatoses (for example Mallorca acne and in particular polymorphic photodermatosis and photodermatitis), rosacea, prurigo forms, **pruritus**, psoriasis forms, ichthyosis, decubitus, ulcus cruris and microbial and viral infections, such as, for example, herpes simplex, h.zoster or h.labialis.

SUMM Other preferred antioxidants C) according to the invention and antioxidative active compounds are: L-amino acids (for example of glycine, histidine, tyrosine, tryptophan, phenylalanine, methionine, glutamic acid, arginine and serine) and derivatives thereof (for example hydroxyl, methyl and ethyl compounds), imidazoles (for example urocanic acid) and derivatives thereof, peptides having a content of L-histidine, such as, for example, D,L-carnosine, D-carnosine, L-carnosine and derivatives thereof (for example anserine, L-alanylhistidine, L-histidyltryptophan, L-methionylhistidine, L-histidyltyrosyltryptophan and methionyltryptophan) and/or a content of tryptophan (for example L-glycyltryptophan, L-tryptophanylhistidine and L-methionyltryptophan), polyamines (for example spermine and spermidine), carotinoids, carotenes (for example alpha-carotene, .beta.-carotene and lycopin) and derivatives thereof, liponic acid and derivatives thereof (for example dihydroliponic acid), aurothio-glucose, propylthiouracil, oxothiazolidine-4-carboxylate, thiourea and other thiols (for example thioredoxin, glutathione, cysteine, cystine, cystamine and the glycosyl, N-acetyl, methyl, ethyl, propyl, amyl, butyl and lauryl, palmitoyl, oleyl, gamma-linoleyl, cholesteryl and glyceryl esters thereof) and salts thereof, dilauryl thiodipropionate, distearyl thiodipropionate, thiodipropionic acid and derivatives thereof (oxidized and/or reduced forms, esters, ethers, peptides, lipids, nucleotides, nucleosides and salts) and sulfoximine compounds (for example buthionine-sulfoximines, homocysteine-sulfoximine, buthionine-sulfones and penta-, hexa- and heptathionine-sulfoximine) in very low tolerated dosages (for example pmol to mmol/kg). Furthermore (metal)chelators (for example alpha-hydroxy-fatty acids, palmitic acid, phytic acid or lactoferrin), alpha-hydroxy acids (for example citric acid, lactic acid, malic acid, salicylic acid and glyoxylic acid), humic acid, tannic acids, tannins, bile acid and derivatives thereof (for example cholic acid, glucocholic acid, taurocholic acid and taurine), bile extracts, bilirubin, biliverdin, EDTA, EGTA and derivatives thereof, as well as unsaturated fatty acids and derivatives thereof (for example gamma-linoleic acid linoleic acid and oleic acid), folic acid and derivatives thereof, ubiquinone and ubiquinol and derivatives thereof, vitamin C and derivatives (for example ascorbyl palmitate, Mg ascorbyl phosphate, ascorbyl acetates and ascorbyl glycosides), tocotrienols, tocopherols and derivatives thereof (for example vitamin E acetate, alpha-, beta-, gamma- and delta-tocopherols and tocopheryl glycosides), vitamin A and

derivatives (retinol, vitamin A palmitate and vitamin A acid) and coniferyl benzoate of benzoin resin, aqueous or alcoholic tobacco, tea and/or coffee extracts, teeine, caffeine, chlorogenic acid, nicotine, **nicotinic** acid, quercitin, myricitin, ginkgo biloba extracts, Cucumberaceae extracts (for example from cucumbers), brassicaceae extracts (for example from cabbage plants), camomile extract, thyme extract, rosemary extract, kaempferol, benzoic acid and derivatives thereof (for example ethyl, isopropyl and propyl gallate), butylhydroxytoluene, butylhydroxyanisole, nordihydroguaiac resin acid, nordihydroguaiaretic acid, trihydroxybutyrophenone, uric acid, urea and derivatives thereof, mannose, glucose, galactose, fructose and derivatives thereof (for example 6-phosphate, 1,6-diphosphate, dextrans and glucans, in particular beta-glucans), zinc and derivatives thereof (for example ZnO and ZnSO.sub.4), selenium and derivatives thereof (for example selenium-methionine), stilbenes and derivatives thereof (for example stilbene oxide and trans-stilbene oxide), calcium and magnesium and derivatives thereof (for example CaCl.sub.2 and MgCl.sub.2) and the derivatives of these active compounds mentioned which are suitable according to the invention (salts, esters, ethers, alcohols, sugars, nucleotides, nucleosides, peptides and lipids).

SUMM Active compounds D) which are preferred according to the invention and favourably influence and regulate energy metabolism and the endogenous, enzymatic antioxidant systems, in particular in the skin, are, for example, vitamin D and derivatives thereof (for example vitamin D.sub.3), melatonin and derivatives thereof, D-biotin and derivatives thereof (for example biotin ethyl, methyl, butyl, propionyl and isopropionyl ester and biocytin), glucose and glucose derivatives (for example glucose 6-phosphate, glucose 1,6-phosphate, glucosylcysteine, glucosylcystine, glycosylcysteines, glycosylcystines, glucosylglutathione, glucosylcystamine and glycosylcystamine), pyruvate, coenzyme A and derivatives thereof, coenzyme Q, ubiquinol and derivatives thereof, niacic acids, NADH, NADPH, adenine, adenosine, methyl-S-adenosine, cAMP, ADP, ATP, guanine, guanosine, cGMP, GDP, GTP and FAD.sup.+, FADH.sub.2, FMN, folic acid, dihydrofolate, **riboflavin**, pantothenic acid, panthenol, thiaminpyro-phosphate, thiamin, 6-phosphoglucurono-delta-lactone, 6-phosphogluconic acid, fructose 6-phosphate, glycerol-aldehyde 3-phosphate, ribulose 5-phosphate, pyridoxamine, pyridoxal phosphate, biopterins (for example aminopterin and tetrahydropterin), alpha-hyroxy acids (for example lactic acid), and the suitable derivatives (salts, sugars, esters, ethers, nucleotides, nucleosides, peptides and lipids) of the active compounds mentioned.

SUMM 13. One or more coenzymes which are active according to the invention (0.0001-5% by weight) and precursors thereof (for example provitamins and vitamins), such as, for example, biocytin, D-biotin and derivatives thereof (biotinethyl, methyl, butyl, propionyl or isopropionyl ester or biocytin), glucose and glucose derivatives (for example glucose 6-phosphate, glucose 1,6-phosphate, glucosylcysteine, glucosylcystine, dextrans, glycosylcysteines, glycosylcystines, glucosylglutathione, glucosylcystamine or glycosylcystamine), pyruvate, coenzyme A and derivatives thereof, niacic acid, NADH, NADPH, adenine, adenosine, methyl S-adenosine, AMP, cAMP, ADP, ATP, guanine, guanosine, GMP, cGMP, GDP, GTP and FAD.sup.+, FADH.sub.2, FMN, folic acid, dihydrofolate, **riboflavin**, pantothenic acid, panthenol, thiamin pyrophosphate, thiamin, 6-phosphoglucurono-delta-lactone, 6-phosphogluconic acid, fructose 6-phosphate, glycerylaldehyde 3-phosphate, ribulose 5-phosphate, pyridoxamine, pyridoxal phosphate, biopterins (for example aminopterin or tetrahydropterin), coenzyme Q and derivatives thereof (for example ubiquinol), vitamin D and derivatives thereof (for example vitamin D.sub.3) and the suitable derivatives (salts, sugars, esters, alcohols, ethers, nucleotides, nucleosides, peptides and lipids) in combinations with one or more active compounds of the active systems

mentioned under 1-12.

SUMM The following combination C, for example, which can be composed of the following individual substances and derivatives thereof, is furthermore preferred, in particular for prurigo forms and **pruritus** forms: Combination C: phloridzin 1.8% by weight, ferulic acid 0.8% by weight, diosmin 0.2% by weight, 0.8% by weight, citric acid 1.4% by weight, glutamylcysteine 0.05% by weight, glutamic acid 0.5% by weight, L-arginine 1.0% by weight, vitamin E palmitate 1.5% by weight, liponic acid 0.005% by weight, L-carnosine 1.8% by weight, sylimarin 0.3% by weight.

SUMM These active compounds in combination with active systems 2-4, 6, 7, 9, 12 and 13 have also proved to be particularly advantageous for treatment of prurigo forms and **pruritus** forms.

SUMM The active compounds according to the invention and combinations thereof and the formulations obtained with them, such as pharmaceutical preparations and topical formulations in the form of creams, lotions, gels and sprays, as well as solutions (for example aqueous, alcoholic or aqueous-alcoholic) and other suitable formulations are prophylactically active, in particular, in that they protect sensitive skin predisposed to the dermatoses mentioned under I. to XIII., in particular in the case of atopic dermatitis and photodermatoses, or reduce the development of these. For this, the formulations comprising the active compounds are used regularly once and several times daily. In the case of the manifest dermatoses mentioned, in particular atopic dermatitis (for example atopic eczema or neurodermatitis), ichthyosis, polymorphic photodermatosis, psoriasis and **pruritus**, an improvement in the state of the skin, in particular a subsidence in the itching which occurs with these dermatoses, takes place after adequate treatment with the active compounds and formulations according to the invention. The diseases can then be further treated prophylactically.

ACCESSION NUMBER: 2001:14517 USPATFULL
TITLE: Agents acting against hyperreactive and hypoactive, deficient skin conditions and manifest dermatitides
INVENTOR(S): Lanzendorfer, Ghita, Hamburg, Germany, Federal Republic of
Stab, Franz, Echem, Germany, Federal Republic of
Untiedt, Sven, Hamburg, Germany, Federal Republic of
PATENT ASSIGNEE(S): Beiersdorf AG, Hamburg, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6180662	B1	20010130
APPLICATION INFO.:	US 1999-306067		19990506 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1997-849523, filed on 18 Sep 1997, now patented, Pat. No. US 5952373

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1994-4444238	19941213

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Weddington, Kevin E.
LEGAL REPRESENTATIVE: Norris, McLaughlin & Marcus, P.A.
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
LINE COUNT: 1574
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 5 OF 6 USPATFULL

SUMM The present invention particularly relates to active compounds and formulations, in particular for topical use, which are used for prophylaxis and treatment of hyperreactive skin predisposed to dermatitis, and of deficient hypoactive skin and for prophylaxis and treatment of the manifest dermatoses mentioned under I. to XIII., such as, for example, atopic dermatitis, neurodermatitis, atopic eczema and seborrhoeic dermatitis, photoinduced dermatoses (for example Mallorca acne and in particular polymorphic photodermatosis and photodermatitis), rosacea, prurigo forms, **pruritus**, psoriasis forms, ichthyosis, decubitus, ulcus cruris and microbial and viral infections, such as, for example, herpes simplex, h.zoster or h.labialis.

SUMM Other preferred antioxidants C) according to the invention and antioxidative active compounds are: L-amino acids (for example of glycine, histidine, tyrosine, tryptophan, phenylalanine, methionine, glutamic acid, arginine and serine) and derivatives thereof (for example hydroxyl, methyl and ethyl compounds), imidazoles (for example urocanic acid) and derivatives thereof, peptides having a content of L-histidine, such as, for example, D,L-carnosine, D-carnosine, L-carnosine and derivatives thereof (for example anserine, L-alanylhistidine, L-histidyltryptophan, L-methionylhistidine, L-histidyltyrosyltryptophan and methionyltryptophan) and/or a content of tryptophan (for example L-glycyltryptophan, L-tryptophanylhistidine and L-methionyltryptophan), polyamines (for example spermine and spermidine), carotinoids, carotenes (for example alpha-arotene, .beta.-carotene and lycopin) and derivatives thereof, liponic acid and derivatives thereof (for example dihydroliponic acid), aurothio-glucose, propylthiouracil, oxothiazolidine-4-carboxylate, thiourea and other thiols (for example thioredoxin, glutathione, cysteine, cystine, cystamine and the glycosyl, N-acetyl, methyl, ethyl, propyl, amyl, butyl and lauryl, palmitoyl, oleyl, gamma-linoleyl, cholesteryl and glyceryl esters thereof) and salts thereof, dilauryl thiodipropionate, distearyl thiodipropionate, thiodipropionic acid and derivatives thereof (oxidized and/or reduced forms, esters, ethers, peptides, lipids, nucleotides, nucleosides and salts) and sulfoximine compounds (for example buthionine-sulfoximines, homocysteine-sulfoximine, buthionine-sulfones and penta-, hexa- and heptathionine-sulfoximine) in very low tolerated dosages (for example pmol to mmol/kg). Furthermore (metal)chelators (for example alpha-hydroxy-fatty acids, palmitic acid, phytic acid or lactoferrin), alpha-hydroxy acids (for example citric acid, lactic acid, malic acid, salicylic acid and glyoxylic acid), humic acid, tannic acids, tannins, bile acid and derivatives thereof (for example cholic acid, glucocholic acid, taurocholic acid and taurine), bile extracts, bilirubin, biliverdin, EDTA, EGTA and derivatives thereof, as well as unsaturated fatty acids and derivatives thereof (for example gamma-linoleic acid linoleic acid and oleic acid), folic acid and derivatives thereof, ubiquinone and ubiquinol and derivatives thereof, vitamin C and derivatives (for example ascorbyl palmitate, Mg ascorbyl phosphate, ascorbyl acetates and ascorbyl glycosides), tocotrienols, tocopherols and derivatives thereof (for example vitamin E acetate, alpha-, beta-, gamma- and delta-tocopherols and tocopheryl glycosides), vitamin A and derivatives (retinol, vitamin A palmitate and vitamin A acid) and coniferyl benzoate of benzoin resin, aqueous or alcoholic tobacco, tea and/or coffee extracts, teeine, caffeine, chlorogenic acid, nicotine, **nicotinic** acid, quercitin, myricitin, ginkgo biloba extracts, Cucumberaceae extracts (for example from cucumbers), brassicaceae extracts (for example from cabbage plants), camomile extract, thyme extract, rosemary extract, kaempferol, benzoic acid and derivatives thereof (for example ethyl, isopropyl and propyl gallate), butylhydroxytoluene, butylhydroxyanisole, nordihydroguaiac resin acid, nordihydroguaiaretic acid, trihydroxybutyrophenone, uric acid, urea and derivatives thereof, mannose, glucose, galactose, fructose and derivatives thereof (for example 6-phosphate, 1,6-diphosphate, dextrans and glucans, in particular beta-glucans), zinc and derivatives thereof

(for example ZnO and ZnSO.sub.4), selenium and derivatives thereof (for example selenium-methionine), stilbenes and derivatives thereof (for example stilbene oxide and trans-stilbene oxide), calcium and magnesium and derivatives thereof (for example CaCl.sub.2 and MgCl.sub.2) and the derivatives of these active compounds mentioned which are suitable according to the invention (salts, esters, ethers, alcohols, sugars, nucleotides, nucleosides, peptides and lipids).

SUMM Active compounds D) which are preferred according to the invention and favourably influence and regulate energy metabolism and the endogenous, enzymatic antioxidant systems, in particular in the skin, are, for example, vitamin D and derivatives thereof (for example vitamin D.sub.3), melatonin and derivatives thereof, D-biotin and derivatives thereof (for example biotin ethyl, methyl, butyl, propionyl and isopropionyl ester and biocytin), glucose and glucose derivatives (for example glucose 6-phosphate, glucose 1,6-phosphate, glucosylcysteine, glucosylcystine, glycosylcysteines, glycosylcystines, glucosylglutathione, glucosylcystamine and glycosylcystamine), pyruvate, coenzyme A and derivatives thereof, coenzyme Q, ubiquinol and derivatives thereof, niacic acids, NADH, NADPH, adenine, adenosine, methyl-S-adenosine, cAMP, ADP, ATP, guanine, guanosine, cGMP, GDP, GTP and FAD.sup.+, FADH.sub.2, FMN, folic acid, dihydrofolate, **riboflavin**, pantothenic acid, panthenol, thiaminpyrophosphate, thiamin, 6-phosphoglucurono-delta-lactone, 6-phosphogluconic acid, fructose 6-phosphate, glycerolaldehyde 3-phosphate, ribulose 5-phosphate, pyridoxamine, pyridoxal phosphate, biopterins (for example aminopterin and tetrahydropterin), alpha-hyroxy acids (for example lactic acid), and the suitable derivatives (salts, sugars, esters, ethers, nucleotides, nucleosides, peptides and lipids) of the active compounds mentioned.

SUMM 13. One or more coenzymes which are active according to the invention (0.0001-5% by weight) and precursors thereof (for example provitamins and vitamins), such as, for example, biocytin, D-biotin and derivatives thereof (biotinethyl, methyl, butyl, propionyl or isopropionyl ester or biocytin), glucose and glucose derivatives (for example glucose 6-phosphate, glucose 1,6-phosphate, glucosylcysteine, glucosylcystine, dextrans, glycosylcysteines, glycosylcystines, glucosylglutathione, glucosylcystamine or glycosylcystamine), pyruvate, coenzyme A and derivatives thereof, niacic acid, NADH, NADPH, adenine, adenosine, methyl S-adenosine, AMP, cAMP, ADP, ATP, guanine, guanosine, GMP, cGMP, GDP, GTP and FAD.sup.+, FADH.sub.2, FMN, folic acid, dihydrofolate, **riboflavin**, pantothenic acid, panthenol, thiamin pyrophosphate, thiamin, 6-phosphoglucurono-delta-lactone, 6-phosphogluconic acid, fructose 6-phosphate, glycerylaldehyde 3-phosphate, ribulose 5-phosphate, pyridoxamine, pyridoxal phosphate, biopterins (for example aminopterin or tetrahydropterin), coenzyme Q and derivatives thereof (for example ubiquinol), vitamin D and derivatives thereof (for example vitamin D.sub.3) and the suitable derivatives (salts, sugars, esters, alcohols, ethers, nucleotides, nucleosides, peptides and lipids) in combinations with one or more active compounds of the active systems mentioned under 1-12.

SUMM The following combination C, for example, which can be composed of the following individual substances and derivatives thereof, is furthermore preferred, in particular for prurigo forms and **pruritus** forms: Combination C: phloridzin 1.8% by weight, ferulic acid 0.8% by weight, diosmin 0.2% by weight, 0.8% by weight, citric acid 1.4% by weight, glutamylcysteine 0.05% by weight, glutamic acid 0.5% by weight, L-arginine 1.0% by weight, vitamin E palmitate 1.5% by weight, liponic acid 0.005% by weight, L-carnosine 1.8% by weight, sylimarin 0.3% by weight.

SUMM These active compounds in combination with active systems 2-4, 6, 7, 9,

12 and 13 have also proved to be particularly advantageous for treatment of prurigo forms and **pruritus** forms.

SUMM The active compounds according to the invention and combinations thereof and the formulations obtained with them, such as pharmaceutical preparations and topical formulations in the form of creams, lotions, gels and sprays, as well as solutions (for example aqueous, alcoholic or aqueous-alcoholic) and other suitable formulations are prophylactically active, in particular, in that they protect sensitive skin predisposed to the dermatoses mentioned under I. to XIII., in particular in the case of atopic dermatitis and photodermatoses, or reduce the development of these. For this, the formulations comprising the active compounds are used regularly once and several times daily. In the case of the manifest dermatoses mentioned, in particular atopic dermatitis (for example atopic eczema or neurodermatitis), ichthyosis, polymorphic photodermatosis, psoriasis and **pruritus**, an improvement in the state of the skin, in particular a subsidence in the itching which occurs with these dermatoses, takes place after adequate treatment with the active compounds and formulations according to the invention. The diseases can then be further treated prophylactically.

ACCESSION NUMBER: 1999:110362 USPATFULL
TITLE: Agents acting against hyperreactive and hypoactive, deficient skin conditions and manifest dermatitides
INVENTOR(S): Lanzendorfer, Ghita, Hamburg, Germany, Federal Republic of
Stab, Franz, Echem, Germany, Federal Republic of
Untiedt, Sven, Hamburg, Germany, Federal Republic of
PATENT ASSIGNEE(S): Beiersdorf AG, Hamburg, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5952373		19990914	
	WO 9618381		19960620	
APPLICATION INFO.:	US 1997-849523		19970908	(8)
	WO 1995-EP4907		19951212	
			19970908	PCT 371 date
			19970908	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1994-4444238	19941213

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Weddington, Kevin E.
LEGAL REPRESENTATIVE: Sprung Kramer Schaefer & Briscoe
NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
LINE COUNT: 1583
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 6 OF 6 USPATFULL
SUMM a) Dryness, cracking, roughness and development of dryness wrinkles, itching (**pruritus**) and/or reduced re-oiling by sebaceous glands (for example after washing).

SUMM It is also advantageous to add to the formulations, in particular, 0.01-10 per cent by weight of substances or substance combinations of aerobic cell energy metabolism (for example cell energy transfer agents (such as creatine, guanine, guanosine, adenine, adenosine, nicotine, **nicotinamide** and **riboflavin**), coenzymes (for example pantothenic acid, panthenol, liponic acid and niacin), auxiliary factors (for example L-carnitine and uridine), substrates (for example hexoses,

L12 ANSWER 3 OF 881 CAPLUS COPYRIGHT 2003 ACS

TI Use of regularly scheduled high-dose intravenous methotrexate for the treatment of multiple sclerosis and other non-infections, **non-neoplastic inflammatory** conditions of the central nervous system

AB The invention is directed to the treatment of multiple sclerosis by periodically administering a high dose of methotrexate at a level sufficiently high to cross the blood-brain barrier. The methotrexate administration is accompanied by leucovorin rescue of the periphery. The high-dose methotrexate is preferably administered at 1 to 4 mo intervals. The periodic high-dose methotrexate treatment may be used in conjunction with interim treatments using a therapeutic agent that is effective in treating MS, but does not cross the BBB in cytotoxic amts. It is contemplated that the method of the invention may be employed to treat other non-infections, **non-neoplastic inflammatory** conditions of the CNS.

ST multiple sclerosis CNS **inflammation** methotrexate; leucovorin methotrexate multiple sclerosis

IT Nervous system
(central, **inflammation**; regularly scheduled high-dose i.v. methotrexate for treatment of multiple sclerosis and other non-infections, **non-neoplastic** CNS **inflammatory** conditions, and use with other agents)

IT Biological transport
Toxicity
(drug; regularly scheduled high-dose i.v. methotrexate for treatment of multiple sclerosis and other non-infections, **non-neoplastic** CNS **inflammatory** conditions, and use with other agents)

IT Anti-**inflammatory** agents
Blood-brain barrier
Human
Immunomodulators

SUMM It is believed that intake of **nicotinamide** and/or NAD aids in the breakdown of alcohol and its breakdown intermediates. Moreover, it is known that co-enzymes are generally involved in oxidative metabolism and it is thought that the administration of the co-enzyme NAD or of **nicotinamide** as precursor of NAD has a generally restorative and invigorating effect upon the body which not only accelerates the process of alcohol breakdown but protects tissues against the toxic effects both of alcohol and its breakdown products. In addition to the effects of the co-enzyme per se, there is a therapeutic synergistic action between the compulsory components of the composition which action is increased by the addition of one or more optional components, especially of water-soluble vitamins. Typically, water-soluble vitamins which are advantageous in the composition are **selected** from the group comprising pantothenic acid, **riboflavin**, pyridoxine hydrochloride, thiamine hydrochloride, and ascorbic acid.

CLM What is claimed is:

1. A therapeutic composition for the treatment of the symptoms associated with the excessive intake of alcohol, comprising: (a) an analgesic; (b) 70 to 1500 mg per unit dose of **nicotinamide** or 70 to 300 mg of **nicotinamide** adenine dinucleotide (NAD); wherein the amount of component (b) is 7% or greater by weight of component (a), further comprising one or more of the following components: (c) a water soluble vitamin selected from the group consisting of pantothenic acid, riboflavin, pyridoxine hydrochloride, thiamine hydrochloride and ascorbic acid; (d) an antacid component; (e) an electrolyte salt replacing component; (f) trace metal ions; (g) an antihistamine selected from the group consisting of promethazine-hydrochloride, chlor-phenisamine maleate, diphenhydramine hydrochloride, dimenhydrinate, carboxamine maleate, pyrilamine maleate, tripelennamine hydrochloride or pamoate, brompheniramine maleate, hydroxyzine hydrochloride or lactate, cyclizine hydrochloride or lactate, meclizine hydrochloride or buclizine hydrochloride; (h) fructose; (i) an alkaloid having a stimulating effect; and (j) pharmaceutically acceptable additives according to the form of administration, selected from the group consisting of sweetening agents, flavoring agents, coloring agents, effervescent components, carriers, and fillers.

2. A therapeutic composition for the treatment of the symptoms associated with the excessive intake of alcohol, comprising: (a) an analgesic; (b) 70 to 1500 mg per unit dose of **nicotinamide**; and (c) 70 to 300 mg of **nicotinamide** adenine dinucleotide (NAD); wherein the amount of components (b) and (c) is 7% or greater by weight of component (a), further comprising one or more of the following components: (d) a water soluble vitamin selected from the group consisting of pantothenic acid, riboflavin, pyridoxine hydrochloride, thiamine hydrochloride and ascorbic acid; (e) an antacid component; (f) an electrolyte salt replacing component; (g) trace metal ions; (h) an antihistamine selected from the group consisting of promethazine-hydrochloride, chlor-phenisamine maleate, diphenhydramine hydrochloride, dimenhydrinate, carboxamine maleate, pyrilamine maleate, tripelennamine hydrochloride or pamoate, brompheniramine maleate, hydroxyzine hydrochloride or lactate, cyclizine hydrochloride or lactate, meclizine hydrochloride or buclizine hydrochloride; (i) fructose; (j) an alkaloid having a stimulating effect; and (k) pharmaceutically acceptable additives according to the form of administration, selected from the group consisting of sweetening agents, flavoring agents, coloring agents, effervescent components, carriers, and fillers.

9. A therapeutic composition for the treatment of the symptoms associated with the excessive intake of alcohol, comprising per dosage units: 600-900 mg of acetylsalicylic acid; 300-500 mg of **nicotinamide**; and 0.5 to 20 mg of zinc ions.

PI US 5053396 19911001

SUMM It is believed that intake of **nicotinamide** and/or NAD aids in the breakdown of alcohol and its breakdown intermediates. Moreover, it is known that co-enzymes are generally involved in oxidative metabolism and it is thought that the administration of the co-enzyme NAD or of **nicotinamide** as precursor of NAD has a generally restorative and invigorating effect upon the body which not only accelerates the process of alcohol breakdown but protects tissues against the toxic effects both of alcohol and its breakdown products. In addition to the effects of the co-enzyme per se, there is a therapeutic synergistic action between the compulsory components of the composition which action is increased by the addition of one or more optional components, especially of water-soluble vitamins. Typically, water-soluble vitamins which are advantageous in the composition are **selected** from the group comprising pantothenic acid, **riboflavin**, pyridoxine hydrochloride, thiamine hydrochloride, and ascorbic acid.

CLM What is claimed is:

1. A therapeutic composition for the treatment of the symptoms associated with the excessive intake of alcohol, comprising: (a) an analgesic; (b) 70 to 1500 mg per unit dose of **nicotinamide** or 70 to 300 mg of **nicotinamide** adenine dinucleotide (NAD); wherein the amount of component (b) is 7% or greater by weight of component (a), further comprising one or more of the following components: (c) a water soluble vitamin selected from the group consisting of pantothenic acid, riboflavin, pyridoxine hydrochloride, thiamine hydrochloride and ascorbic acid; (d) an antacid component; (e) an electrolyte salt replacing component; (f) trace metal ions; (g) an antihistamine selected from the group consisting of promethazine-hydrochloride, chlor-phenisamine maleate, diphenhydramine hydrochloride, dimenhydrinate, carboxamine maleate, pyrilamine maleate, tripelennamine hydrochloride or pamoate, brompheniramine maleate, hydroxyzine hydrochloride or lactate, cyclizine hydrochloride or lactate, meclizine hydrochloride or buclizine hydrochloride; (h) fructose; (i) an alkaloid having a stimulating effect; and (j) pharmaceutically acceptable additives according to the form of administration, selected from the group consisting of sweetening agents, flavoring agents, coloring agents, effervescent components, carriers, and fillers.

2. A therapeutic composition for the treatment of the symptoms associated with the excessive intake of alcohol, comprising: (a) an analgesic; (b) 70 to 1500 mg per unit dose of **nicotinamide**; and (c) 70 to 300 mg of **nicotinamide** adenine dinucleotide (NAD); wherein the amount of components (b) and (c) is 7% or greater by weight of component (a), further comprising one or more of the following components: (d) a water soluble vitamin selected from the group consisting of pantothenic acid, riboflavin, pyridoxine hydrochloride, thiamine hydrochloride and ascorbic acid; (e) an antacid component; (f) an electrolyte salt replacing component; (g) trace metal ions; (h) an antihistamine selected from the group consisting of promethazine-hydrochloride, chlor-phenisamine maleate, diphenhydramine hydrochloride, dimenhydrinate, carboxamine maleate, pyrilamine maleate, tripelennamine hydrochloride or pamoate, brompheniramine maleate, hydroxyzine hydrochloride or lactate, cyclizine hydrochloride or lactate, meclizine hydrochloride or buclizine hydrochloride; (i) fructose; (j) an alkaloid having a stimulating effect; and (k) pharmaceutically acceptable additives according to the form of administration, selected from the group consisting of sweetening agents, flavoring agents, coloring agents, effervescent components, carriers, and fillers.

9. A therapeutic composition for the treatment of the symptoms associated with the excessive intake of alcohol, comprising per dosage units: 600-900 mg of acetylsalicylic acid; 300-500 mg of **nicotinamide**; and 0.5 to 20 mg of zinc ions.

PI US 5053396 19911001

CLM What is claimed is:

1. A method of treating chronic and physical **urticaria** in a human which comprises administering to a human in need of such therapy an amount of (+) cetirizine, or a pharmaceutically acceptable salt thereof, substantially free of its (-) stereoisomer, said amount being sufficient to alleviate symptoms of chronic and physical **urticaria**.

2. A method of treating chronic and physical **urticaria** in a human, while avoiding the concomitant liability of sedation associated with racemic cetirizine, which comprises administering to a human in need of such therapy an amount of (+) cetirizine, or a pharmaceutically acceptable salt thereof, substantially free of its (-) stereoisomer, said amount being sufficient to alleviate symptoms of chronic and physical **urticaria** but insufficient to cause said sedation.

3. The method of claim 2 wherein (+) cetirizine is administered by transdermal delivery.

4. The method of claim 3 wherein the amount of (+) cetirizine or a pharmaceutically acceptable salt thereof administered is from about 1 mg to about 25 mg per day.

5. The method of claim 2 wherein the amount of said (+) cetirizine or a pharmaceutically acceptable salt thereof, substantially free of its (-) stereoisomer, is administered together with a pharmaceutically acceptable carrier.

6. The method according to claim 2, wherein (+) cetirizine is administered as a hydrochloride salt.

PI US 5627183 19970506

L12 ANSWER 21 OF 29 USPATFULL
AB Novel sulfhydryl group-containing amides and disulfide group-containing bis-amides useful for treating or preventing an abnormal biological condition or a disease, and/or improving the texture or appearance of the skin, as well as compositions containing amides and bis-amides and methods for their use are described. Such types of abnormal biological conditions or diseases include skin atrophy, i.e., the thinning and/or general degradation of the dermis often characterized by a decrease in collagen and/or elastin as well as decreased number, size and doubling potential of fibroblast cells, and other maladies including, but are not limited to dry skin, severe dry skin, dandruff, acne, keratoses, psoriasis, eczema, skin flakiness, **pruritus**, age spots, lentigines, melasmas, wrinkles, warts, blemished skin, hyperpigmented skin, hyperkeratotic skin, inflammatory dermatoses, age-related skin changes and skin in need of cleansers.
PI US 5948418 19990907

L12 ANSWER 22 OF 29 USPATFULL
AB Methods of treating and preventing drug-induced **pruritus** in patients by administration of a serotonin type 3 antagonist are provided.
PI US 5756514 19980526

L12 ANSWER 23 OF 29 USPATFULL
AB This invention relates to pharmaceutical compositions containing 5'-deoxy-5'-methylthioadenosine, S-adenosyl-methionine and their pharmaceutically acceptable salts able to reduce scalp seborrhea and its related furfuraceous desquamation and **pruritus**.
PI US 5753213 19980519

L12 ANSWER 24 OF 29 USPATFULL
AB The present invention relates to the area of pharmacology; its objective is to solve the technical problem of inflammation, pain, **pruritus** and local hyperthermia in human beings and animal species. The composition and the subcompositions thereof are obtained from plants of the family Cactaceae, the main methodological steps being a set of processes: production, purification, physicochemical quantification, biotherapeutic evaluation, biopharmaceutical formulation and molecular identification. From the molecular identification a set of molecules is recognized, comprising carbohydrates and an aromatic amine, the general formulae of which are:

C.sub.5 H.sub.10 O.sub.5 (RIBOSE),

C.sub.6 H.sub.12 O.sub.5 (FUCOSE),

C.sub.6 H.sub.12 O.sub.6 (GALACTOSE; MANNOSE; GLUCOSE),

C.sub.8 H.sub.11 O.sub.2 N (1-HYDROXY-1-(4-HYDROXYPHENYL)-2-AMINOETHANE),

C.sub.10 H.sub.18 O.sub.9 (RIBOFURANOSYLRIBOSE).
PI US 5747462 19980505

L12 ANSWER 25 OF 29 USPATFULL
AB Novel sulfhydryl group-containing amides and disulfide group-containing bis-amides useful for treating or preventing an abnormal biological condition or a disease, and/or improving the texture or appearance of the skin, as well as compositions containing amides and bis-amides and methods for their use are described. Such types of abnormal biological conditions or diseases include skin atrophy, i.e., the thinning and/or general degradation of the dermis often characterized by a decrease in

collagen and/or elastin as well as decreased number, size and doubling potential of fibroblast cells, and other maladies including, but are not limited to dry skin, severe dry skin, dandruff, acne, keratoses, psoriasis, eczema, skin flakiness, **pruritus**, age spots, lentigines, melasmas, wrinkles, warts, blemished skin, hyperpigmented skin, hyperkeratotic skin, inflammatory dermatoses, age-related skin changes and skin in need of cleansers.

PI US 5683705 19971104

L12 ANSWER 26 OF 29 USPATFULL

AB The invention relates to a cosmetic or pharmaceutical composition which comprises oxyacanthine, one of its derivatives, one of their cosmetically or pharmaceutically acceptable acid addition salts or an extract of a plant in which it is present, such as Berberis vulgaris or barberry. One particular association is that of oxyacanthine with a saponin. This composition can be intended in particular for stimulating hair growth, retarding hair loss or combating **pruritus**.

PI US 5607693 19970304

L12 ANSWER 27 OF 29 USPATFULL

AB A method for the relief of **pruritus** comprising the administration of an effective antipruritic amount of a N-(trifluoromethylphenyl)anthranilic acid ester to an afflicted patient.

PI US 4734434 19880329

L12 ANSWER 28 OF 29 USPATFULL

AB 2-Naphthyl acetic acid derivatives and the corresponding amides, esters, hydroxamic acids and addition salts thereof, optionally substituted at the .alpha.-position on the acetic acid moiety and/or at position 6 and/or at positions 1, 4, 7 or 8 on the naphthyl ring and optionally saturated at positions 3 and 4, are anti-inflammatory, analgesic, anti-pyretic and anti-pruritic agents. A pharmaceutical method of effecting treatment of inflammation, pain, pyrexia and **pruritus** by the administration of naphthyl acetic acid derivatives. A pharmaceutical composition for use in the treatment of the above maladies comprising a naphthyl acetic acid derivative.

PI US 4051233 19770927

L12 ANSWER 29 OF 29 USPATFULL

AB 2-Naphthyl acetic acid derivatives and the corresponding amides, esters, hydroxamic acids and addition salts thereof, optionally substituted at the .alpha.-position on the acetic acid moiety and/or at position 6 and/or at positions 1, 4, 7 or 8 on the naphthyl ring and optionally saturated at positions 3 and 4, are anti-inflammatory, analgesic, anti-pyretic and anti-pruritic agents. A pharmaceutical method of effecting treatment of inflammation, pain, pyrexia and **pruritus** by the administration of naphthyl acetic acid derivatives. A pharmaceutical composition for use in the treatment of the above maladies comprising a naphthyl acetic acid derivative.

PI US 3998966 19761221

ersion. The resulting solution was added with 5 g of **riboflavin** to suspend it, followed by dissolution of the resulting suspension in water for injection into 100 ml of another solution. The thus-obtained solution was poured in parts into 5-ml ampules and sterilized with steam, thereby preparing immunopotentiating and infection protective agents.

CLM What is claimed is:

1. A method for **treatment** of diseases selected from the group consisting of: in humans, leukopenia, autoimmune diseases, sepsis and urinary tract infection; in swine, diarrhea, epidemic pneumonia, atrophic **rhinitis** and infectious gastroenteritis; in domestic fowl, pneumonia and Marek's disease; in bovines, diarrhea, pneumonia and udder inflammation; and in cats, leukemia, which comprises administering to a human or animal patient selected from the group consisting of swine, domestic fowl, bovines and cats, in need of such **treatment** a composition consisting of **riboflavin** and/or a **riboflavin** derivative.

ACCESSION NUMBER:	1998:119147 USPATFULL
TITLE:	Immunopotentiating and infection protective agent and production thereof
INVENTOR(S):	Araki, Seiichi, Ibaraki Prefecture, Japan Suzuki, Mamoru, Ibaraki Prefecture, Japan Fujimoto, Masatoshi, Ibaraki Prefecture, Japan
PATENT ASSIGNEE(S):	Eisai Co., Ltd., Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5814632		19980929
APPLICATION INFO.:	US 4206320		19950412 (8)
RELATED APPLN. INFO.:	Division of Ser. No. 204333, filed on 14 Mar 1994, now abandoned		

	NUMBER	DATE
PRIORITY INFORMATION:	JP 3-261288	19910913

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Weddington, Kevin E.
LEGAL REPRESENTATIVE:	Wenderoth, Lind & Ponack
NUMBER OF CLAIMS:	2
EXEMPLARY CLAIM:	1
LINE COUNT:	561

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

19 The composition according to claim 16, for the **treatment** and/or
the prophylaxis of a disorder chosen from the group consisting of urticaria
and/or angioedema, asthma, allergic rhinitis and allergic oculorhinitis.

20 The composition according to any one of claims 16-19, wherein said combination consists of nicotinic acid or nicotinamide and **riboflavin** in a
ratio by weight of from 40:1 to 10:1 (nicotinic acid or niacinamide : **riboflavin**),
io in a pharmaceutically acceptable vehicle or carrier suitable for systemic ad-
ministration.

PI WO 2000069426 A2 20001123

L32 ANSWER 31 OF 46 USPATFULL

DETD . . . a dull or blunt means, such as traumatic impact). The therapeutic compositions of this invention may also be used to **treat** various dermatological disorders such as hyperkeratosis, burns, cutaneous ulcers, psoriasis and the like. The subject compositions may also be used. . . oral tissue such as mouth sores. The subject compositions may in addition be used in anorectal creams and suppositories to **treat** such conditions as, for example, **pruritus**, proctitus, anal fissures and hemorrhoids.

DETD . . . appliance of this invention may be coated with a color indicator to assist the user, such as yellow vitamin B.sub.2 (**riboflavin**) or a suitable dye such as hemin. By color coding the appliance, the user knowingly avoids touching or otherwise contaminating. . .

PI US 5891881 19990406

ACCESSION NUMBER: 1999:102809 USPATFULL
TITLE: Immunopotentiating and infection protective agent and production thereof
INVENTOR(S): Araki, Seiichi, Ibaraki Prefecture, Japan
Suzuki, Mamoru, Ibaraki Prefecture, Japan
Fujimoto, Masatoshi, Ibaraki Prefecture, Japan
PATENT ASSIGNEE(S): Eisai Co., Ltd., Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5945420		19990831
APPLICATION INFO.:	US 1998-60329		19980415 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1995-420632, filed on 12 Apr 1995, now patented, Pat. No. US 5814632 which is a division of Ser. No. US 204333

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1991-261288	19910913

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Weddington, Kevin E.
LEGAL REPRESENTATIVE: Wenderoth, Lind & Ponack, L.L.P.
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
LINE COUNT: 581
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DETD **Riboflavin** is yet another B-complex **vitamin**, **B2**. Its primary roles are in converting proteins, fats, and carbohydrates from foods into substance forms the body can use. In addition, it plays a vital role in the production of the thyroid hormone. It also aids the body in producing infection-fighting immune cells and works with other nutrients to produce healthy, new red blood cells. In addition, it converts Vitamin B6 and niacin into active forms so they can carry out their functions in the body.

CLM What is claimed is:

13. A composition of matter intended to supplement the diet, (a) said composition of matter containing the followirg ingredients: Vitamin K, ginsencg root, green tea leaf, Vitamin A, Vitarnin C, Vitarnin D, Vitamn E, Thiamin, **Riboflavin**, Niacin, vitamin B6, Folate, Vitamin B12, Biotin, Pantothenic acid, Iodine, Magnesium, Zinc, Selenium, Copper, Manganese, Chromirium, Molyhdenum, Chloride and Potassium, (b) said composition of matter intended for ingestion in pill, capsule, tablet or liquid form; (c) said composition of matter not represented for use as a conventional food or as the sole item of a meal or diet; (d) said composition of master labeled as a dietary supplement for use in or by humans, and (e) said composition of matter labeled for use by humans having at least one specific antigen blood type, as defined by blood antigen specificity.

15. The dietary supplement of claim 14, wherein the following ingredients are present in the following approximate amounts: TBL

Vitamin A	5000 IU-20,000 IU	Vitamin C	50 mg-500 mg
Vitamin D	200 IU-400 IU	Vitamin E	25 IU-400 IU
Thiamin	2.5 mg-50 mg		
Riboflavin	2.5 mg-50 mg	Niacin	5.0 mg-50 mg
Vitamin B6	5.0 mg-50 mg	Folate	100 mg-400 mg
Vitamin B12	10 mcg-50 mcg	Biotin	100 mcg-300 mcg
Pantothenic acid	5 mg-50 mg	Iodine	50 mcg-150 mcg
Magnesium	25 mg-100 mg	Zinc	7.5 mg-15 mg
Selenium	50 mcg-200 mcg	Copper	1 mg-2 mg
Manganese	1 mg-2 mg	Chromium	60 mcg-120 mcg
Molybdenum	37.5 mcg-75 mcg	Chloride	1 mg-20 mg
Potassium	1 mg	Boron	1 mg
Vanadium	25 mcg-50 mcg	Octacosanol	1,000 mcg-2,000 mcg
Phenalgin	50 mg-100 mg		
Alpha-lipoic acid	5 mg-30 mg	Bromelain and Papain	10 mg-30 mg.

16. The dietary supplement of claim 15, wherein the following ingredients are present in the following approximate amounts: TBL

Vitamin A natural mixed carotenoids	10,000	IU	Vitamin C	200	mg
Vitamin D	400	IU	Vitamin E	100	IU
Thiamin	25	mg	**Riboflavin**	25	mg
Niacin	25	mg	Vitamin B6	25	mg
Folate	400	mcg	Vitamin B12	50	mcg
Biotin	300	mcg	Pantothenic acid	25	mg
Iodine	150	mcg	Magnesium	50	mg
Zinc	15	mg	Selenium	200	mcg
Copper	2	mg	Manganese	100	mcg
Molybdenum	75	mcg	Chloride	15	mg
Potassium	16	mg	Boron	1	mg
Vanadium	50	mcg	Octacosanol	2,000	mcg
Phenalgin	100	mg	Alpha-lipoic acid	15	mg
Bromelain and Papain	25.5	mg.			

ACCESSION NUMBER: 2001:158355 USPATFULL
TITLE: Dietary supplements for each specific blood type
INVENTOR(S): Fleischner, Albert M., Westwood, NJ, United States
PATENT ASSIGNEE(S): Vitamerica, Inc., Cedar Knolls, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6291533	B1	20010918
APPLICATION INFO.:	US 1999-468819		19991222 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Dees, Jose' G.
ASSISTANT EXAMINER: Choi, Frank
LEGAL REPRESENTATIVE: Pharmaceutical Patent Attorneys, LLC, Pohl, Mark
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
LINE COUNT: 1319
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L59 ANSWER 8 OF 13 USPATFULL

L34 ANSWER 2 OF 32 MEDLINE

AB As part of an international nutrition project sponsored by the International Atomic Energy Agency (see footnote), Vienna, Austria, a number of bench-mark mixed total diet composites from the United States were collected and analyzed for minor and trace elements. In this segment of the project, the daily dietary intakes of the minor elements Ca, Cl, K, Mg, N and P and the trace elements Al, As, Au, Br, Cd, Co, Cr, Cs, Cu, Fe, Hg, I, Mn, Mo, Ni, Pb, Rb, Sb, Sc, Se, Sn, Sr, V, Zn and W were determined in mixed total diet composites of foods collected in the FDA Total Diet Study (FDA-TDS). These diets are representative of foods consumed by 25-30-year-old males (representing the mixed population groups in the United States), the highest of eight intake groups in the TDS scheme. In order to link the US mixed diet composite results from this study group to the more comprehensive information generated by the FDA-TDS, the results are compared with the same age-sex group published by the FDA-TDS scheme. The FDA-TDS scheme is based on individual analysis of the 201 food items, with resultant calculation of the daily intake representative of various age-sex groups. The comparison shows excellent agreement for 21 elements which have been investigated by both approaches. **Additional** elements are reported in the US mixed diet composites from the present study which demonstrate a valuable supplement to the data obtained by FDA-TDS scheme. Further the **mixed** total diet composite approach has also proven useful for the assessment of dietary intake of proximates (protein, fat, carbohydrates), fiber and phytate. In **addition**, vitamins thiamin, **riboflavin**, **niacin**, B6, B12, pantothenic acid, folic acid and biotin were also assayed in these composites.

L34 ANSWER 3 OF 32 MEDLINE

AB Soluble fractions prepared from the mycelia of wild type (74-OR23-1A) and band (bd) exhibited an **increase** in the rate of the ADP ribosylation of a 38 kDa protein from **nicotinamide** adenine [32P]dinucleotide ([32P]NAD) in the presence of 10(-7) M **riboflavin** caused by blue light irradiation in vitro. The soluble fraction was **mixed** with a reaction **mixture** containing 5 microCi [32P]NAD at 0 degree C for 20 s and then it was irradiated with blue light (420 nm, 42 mumol m-2 s-1) for 12.5, 25, 50, 100, 200 or 400 s at 0 degree C or for 100 s with photon irradiance of 0.42, 4.2, 6.4 or 42 mumol m-2 s-1. Immediately after irradiation, the reaction was stopped and analysed by sodium dodecyl sulphate-polyacrylamide gel electrophoresis. An increase in the ADP ribosylation of the 38 kDa protein could be detected within 100 s of irradiation, and the enhancement in the rate of ADP ribosylation of the 38 kDa protein was proportional to the increase in the photon irradiance. By the irradiation with blue light for 200 or 400 s, the ADP ribosylation of a 56 kDa protein could also be detected. Analysis by two-dimensional gel electrophoresis of proteins after ADP ribosylation of them revealed that the 38 kDa proteins displayed at least four radioactive protein spots and the 56 kDa protein a single radioactive protein spot. Soluble fractions of mycelia prepared from blind mutants wc-1, wc-2, delta ps15-1, lis-1, lis-2 and lis-3 exhibited also the enhancement of the ADP ribosylation of the 38 kDa protein by blue light irradiation, and at least wc-1, delta ps15-1, lis-1 and lis-2 displayed a similar blue light response in the 56 kDa protein.

L34 ANSWER 4 OF 32 MEDLINE

AB The Lens Opacities Case-Control Study evaluated risk factors for age-related nuclear, cortical, posterior subcapsular, and mixed cataracts. The 1380 participants were ophthalmology outpatients, aged 40 to 79 years, classified into the following groups: posterior subcapsular only, 72 patients; nuclear only, 137 patients; cortical only, 290 patients; mixed cataract, 446 patients; and controls, 435 patients. In polychotomous logistic regression analyses, low education **increased** risk (odds ratio [OR] = 1.46) and regular use of multivitamin supplements decreased risk (OR = 0.63) for all cataract types. Dietary intake of

riboflavin, vitamins C, E, and carotene, which have antioxidant potential, was protective for cortical, nuclear, and **mixed** cataract; intake of **niacin**, thiamine, and iron also decreased risk. Similar results were found in analyses that **combined** the antioxidant vitamins (OR = 0.40) or considered the individual nutrients (OR = 0.48 to 0.56). Diabetes **increased** risk of posterior subcapsular, cortical, and mixed cataracts (OR = 1.56). Oral steroid therapy increased posterior subcapsular cataract risk (OR = 5.83). Females (OR = 1.51) and nonwhites (OR = 2.03) were at increased risk only for cortical cataract. Risk factors for nuclear cataract were a nonprofessional occupation (OR = 1.96), current smoking (OR = 1.68), body mass index (OR = 0.76), and occupational exposure to sunlight (OR = 0.61). Gout medications (OR = 2.48), family history (OR = 1.52), and use of eyeglasses by age 20 years, which is an indicator of myopia (OR = 1.44), increased risk of mixed cataract. The results support a role for the nutritional, medical, personal, and other factors in cataractogenesis. The potentially modifiable factors suggested by this study merit further evaluation.

L34 ANSWER 5 OF 32 MEDLINE
AB In the lumbar spinal cord of EAE guinea pigs a significant **increase** in SOD activity, lipid hydroperoxides content (more than 60%) and Fe2(+)-ascorbate-induced lipid peroxidation was observed. Multiple injections of cytochrome C-**vitamin B2**-**vitamin PP** (CV-**combination**) during the disease latent period resulted in suppression of EAE development. Supplementation with vitamin C, vitamin B12 or ATP eliminated this suppressive effect. Upon treatment with CV-combination beginning on the day of the first EAE clinical signs a half of the sick animals recovered. In their erythrocytes the ratio between SOD and catalase activities was normalized, though on a higher level. In the lumbar spinal cord the concentration of lipid hydroperoxides was decreased to the control one. Oxidative damage of the central nervous system is one of the mechanisms underlying the pathogenesis of lethal EAE.

L34 ANSWER 6 OF 32 MEDLINE
AB Penetration of 35S-lipoate into nucleated and nucleus-free erythrocytes, isolated cells (enterocytes) and accumulating tissue preparations from intestinal mucosa was studied in presence or in absence of other vitamins. Effect on this process of overloading the penetration of 35S-lipoate into rat and pigeon erythrocytes was found to be **increased**; under these conditions the enterocytes bind less 35S-lipoate than in control animals. Water-soluble vitamins (**nicotinate**, **riboflavine**, thiamin and, especially, panthotenate) decreased the rate of 35S-lipoate penetration into the cells. The **mixture** of the vitamins caused less distinct inhibitory effect, than the panthotenate only.

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L33 ANSWER 1 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB The in-capillary enzyme reaction method was used to determine **riboflavin** phosphate in a vitamin-enriched drink based on its conversion to **riboflavin** (vitamin B,) with alkaline phosphatase. Simultaneously, three water-soluble vitamins [thiamine nitrate (vitamin B, mononitrate), pyridoxine hydrochloride (vitamin B, hydrochloride) and **nicotinamide** (**vitamin PP**)] and anhydrous caffeine in the drink were subjected to quantitative analysis. In the system, electrophoretic migration was used to **mix** zones containing the substrate (**riboflavin** phosphate) and the enzyme (alkaline phosphatase). The reaction was then allowed to proceed in the presence of a weak electric field and, finally, the product (**riboflavin**) of enzyme reaction and other water-soluble vitamins

migrated under the influence of an applied electric field to the detector. All the active ingredients and the formulation excipients were successfully separated by micellar electrokinetic chromatography with 135 mM sodium dodecyl sulfate. To prevent inhibition of enzyme reaction by the **addition** of sodium dodecyl sulfate to the reaction zone, sandwich mode injection, in which plugs of sandwich solution without sodium dodecyl sulfate were introduced into the capillary on both sides of the reaction zone, was utilized as a barrier to protect the enzyme reaction from the inhibitor. The relationship between the peak area of the product and the concentration of the substrate was calculated in the in-capillary enzyme reaction method. Excellent linearity was obtained, with correlation coefficients of 0.9999. The established method was validated and demonstrated to be applicable to the determination of the five active ingredients, including **riboflavin** phosphate, in a commercial vitamin-enriched drink. No interference from the formulation excipients was observed. Good linearities were obtained, with correlation coefficients above 0.999. Recoveries and precisions ranged from 99.3 to 101.8%, and from 0.1 to 2.5% RSD, respectively. Good agreement was obtained between the established method and traditional high-performance liquid chromatographic methods. These results suggest that the in-capillary enzyme reaction method can be used for the simultaneous determination of **riboflavin** phosphate and other water-soluble vitamins in pharmaceuticals. (C) 2002 Elsevier Science B.V. All rights reserved.

L33 ANSWER 2 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB A coformulation of essential factors, i.e. propionyl-L-carnitine (PLC), coenzyme Q(10) (CoQ(10)), **nicotinamide** (NAM), **riboflavin** and pantothenic acid, was administered orally to Wistar rats for 7 weeks and its efficacy was tested through in vivo and in vitro techniques in **improving** motor functions of striated, cardiac and smooth musculature of the rat. In vivo experiments showed that long-term supplementation significantly **improved** horizontal locomotor activity by about 19% in male and 26% in female rats. Maximum values of shortening velocity, work and power were significantly **increased** ($P < .05$) in papillary muscle isolated from treated rats. A positive inotropic effect was also observed on colonic smooth muscle strips upon treatment. Work was the most affected parameter and it **increased** by 160% in smooth muscle from treated animals. The present results indicate that supplementation with the **combination** of the above mentioned substances elicits positive functional changes on motor performance of skeletal, cardiac and smooth muscle of the rat. (C) 2002 Elsevier Science Inc. All rights reserved.

L33 ANSWER 3 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB Objective: Gestation imposes metabolic stress on the mother which heightens as pregnancy progresses. The need for quantifying circulating vitamins is important for identifying pitfalls in metabolic imbalance and nutritional status. For this reason we wanted to analyze blood vitamin concentrations of B12, thiamin, biotin, pantothenate, B6, niacin, riboflavin, fotate, vitamins A, C, E and total carotenes to determine if imbalances occur during the trimesters of pregnancy.

Methods: We randomly selected 563 gravidas who volunteered for this study from the obstetrical clinic of New Jersey Medical School; 132 were in 1st trimester. 198 were in 2nd trimester, and 233 were in 3rd trimester. All were healthy, taking a good diet and supplemented with vitamins. Blood, from an antecubital vein, was analyzed for thiamin, biotin, B12, B6, pantothenate, riboflavin, nicotinate, folates, vitamins A, E, C and total carotenes. Gravidas were classified as being normovitaminemic, hypervitaminemic or hypovitaminemic compared with blood vitamins seen in healthy non-pregnant, non-vitamin supplemented women.

Result: Hypervitaminemic levels of folate, biotin, pantothenate and **riboflavin** were found during any trimester of pregnancy due to vitamin supplementation. Despite the vitamin supplementation, a high

percent of vitamin A, B6, **niacin**, thiamin and B 12 hypovitaminemia was noted during pregnancy trimesters. An especially high percentage of **niacin** deficiency was seen during the 1st trimester; it worsened in later trimesters; B12 deficits **increased** during the late trimesters. **Combination** deficits of **niacin**, thiamin, vitamins A, B6, B12 were noted in each of the trimesters.

Conclusions: Despite vitamin supplementation, a vitamin profile of pregnancy indicates that vitamin deficits exist during the trimesters. Also, combination hypovitaminemias of deficient vitamins were noted; this indicates that a vitamin deficit during pregnancy does not occur in isolation.

L33 ANSWER 4 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB Objective Based on the data collected in the 1992 national nutrition survey in China, the food consumption and nutrients intake were calculated, and the consumption of some micronutrients was evaluated. Method Dietary data were obtained by using a three days' inventory change plus food weighing in **combination** with 24 hours recall method for three consecutive days. The food consumption and nutrients intake were calculated in accordance with the Chinese food composition table. The consumption of some micronutrients was evaluated in reference to the Chinese RDAs. Results The average intakes of **niacin**, ascorbic acid and vitamin E were sufficient, whereas that of zinc, selenium and thiamin were between 80% and 90% RDAs. The consumption of calcium, retinol equivalent and **riboflavin** was low compared with the Chinese RDAs. Calcium was the most insufficient nutrient in Chinese diet. Conclusion Food fortification seems necessary for **improving** the nutritional status of some micronutrients in China.

L33 ANSWER 5 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB A multi-vitamin auxotroph, Torulopsis glabrata strain WSH-IP303, which can use ammonium chloride as a sole nitrogen source for pyruvate production, was selected. To optimize pyruvate yield and productivity, a simple but useful, orthogonal design method, was used to investigate the relationship between thiamine, **nicotinic** acid, pyridoxine, biotin, and **riboflavin**. Thiamine was confirmed to be the most important factor affecting pyruvate production. When the concentration of thiamine was 0.01 mg/l or 0.015 mg/l, glucose consumption was **improved** by **increasing** the **nicotinic** acid concentration. When the concentrations of **nicotinic** acid, thiamine, pyridoxine, biotin, and **riboflavin** were 8.0, 0.015, 0.4, 0.04, and 0.1 mg/l, respectively, pyruvate concentration and yield reached 52 g/l and 0.52 g/g, respectively, in a 48-h flask culture. By employing a **combination** of the optimum vitamin concentrations, a batch culture was conducted in a 2.5-1 fermenter with an initial glucose concentration of 112 g/l; and the pyruvate concentration reached 69 g/l after 56 h (yielding 0.62 g/g).

L33 ANSWER 6 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB A meridic diet (Ceratitis capitata #1) containing corncob as a bullting agent was developed and found comparable to diets currently used for rearing the larvae of the Mediterranean fruit fly, Ceratitis capitata (Wiedemann). The composition of C. capitata #1 diet (mg/50 g diet) is essential amino acids 636; arginine, 106.8; histidine, 45.6; isoleucine, 56.4; leucine, 108; lysine, 58.8; methionine, 27.6; phenylalanine, 70.8; threonine, 54; tryptophan, 28.8; valine, 79.2; non-essential amino acids 964.8; alanine, 78; aspartic acid, 112.8; cystine, 40.8; glutamic acid, 392.4; glycine, 90; proline, 124.8; serine, 78; tyrosine, 48; ribonucleic acid, 100; vitamins, 5.35; (thiamine [vitamin B-1], 1.0; **riboflavin** [vitamin B-2], 1.0; **nicotinic** acid, 1.0; pantothenic acid, 1.0; pyridoxine [vitamin B-6], 1.0; biotin, 0.1; folic acid, 0.25); anti-microbials. 256 (methylparaben), 100; sodium benzoate, 100; p-amino benzoic acid, 1.0; streptomycin. 50; oxytetracycline, HCl 5;

cholesterol, 40; inositol, 10; choline chloride, 20; minerals (McCollum and Davis Salt **mixture** No. 185), 100; citric acid (acidulant).500; sucrose, 2000; corncob grit (screen size 30/80), 12,000; distilled water, 33,000 and pH 3.5. Tire omission of all 10 essential amino acids from the meridic diet **mixture** inhibited development past the first instar. Deletion of eight non-essential amino acids, 10 vitamins, sugar, or ribonucleic acid delayed larval growth. In **addition**, larvae reared on diet without non-essential amino acids, vitamins, sugar or cholesterol resulted in papal weight loss. Pupal recovery and adult emergence were affected by the removal of 10 vitamins or cholesterol from the C. capitata #1 diet. Flight ability was decreased in tire absence of 10 vitamins. No significant effects were shown in diet lacking salt **mixture**.

L33 ANSWER 7 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB The use of vitamin and mineral supplements is **increasing** among young individuals. We surveyed 972 Korean teenagers (age 13-18 y) for their use of vitamin/mineral supplements, their motivational factors, and the dietary consequences of supplement use. Prevalence of vitamin/mineral supplement use was 31%. Supplement use was highest in high-school students, females, individuals living in rural communities, and individuals from families in high socioeconomic strata. The supplements used most frequently were vitamin C, multivitamins, and vitamin A. Supplement users had a more positive view of the potential health benefits of supplements than did non-users. Most supplements were taken daily. **Vitamins B2**, B6, and C were the most frequently ingested nutrients from vitamin/mineral supplements. Vitamin/mineral intakes from supplements had a wide range, with mean intakes typically exceeding Korean or the U.S./Canadian recommended dietary allowances. Vitamins B12, B1, and C and iron comprised 2770%, 1930%, 1120%, and 1026%, respectively, of the Korean recommended dietary allowances. When nutrient intakes from the diet and supplements were **combined**, intakes of **niacin**, vitamin %, and:iron exceeded the recommended upper-intake levels for these nutrients. The health benefits and risks of supplement use by teenagers merits further study.

L33 ANSWER 8 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB As part of an international nutrition project sponsored by the International Atomic Energy Agency (see footnote), Vienna, Austria, a number of bench-mark **mixed** total diet composites from the United States were collected and analyzed for minor and trace elements. In this segment of the project, the daily dietary intakes of the minor elements Ca, Cl, K, Mg, N and P and the trace elements Al, As, Au, Br, Cd, Co, Cr, Cs, Cu, Fe, Hg, I, Mn, Mo, Ni, Pb, Rb, Sb, Sc, Se, Sn, Sr, V, Zn and W were determined in **mixed** total diet composites of foods collected in the FDA Total Diet Study (FDA-TDS). These diets are representative of foods consumed by 25-30-year-old males (representing the **mixed** population groups in the United States), the highest of eight intake groups in the TDS scheme. In order to link the US **mixed** diet composite results from this study group to the more comprehensive information generated by the FDA-TDS, the results are compared with the same age-sex group published by the FDA-TDS scheme. The FDA-TDS scheme is based on individual analysis of the 201 food items, with resultant calculation of the daily intake representative of various age-sex groups. The comparison shows excellent agreement for 21 elements which have been investigated by both approaches. **Additional** elements are reported in the US **mixed** diet composites from the present study which demonstrate a valuable supplement to the data obtained by FDA-TDS scheme. Further the **mixed** total diet composite approach has also proven useful for the assessment of dietary intake of proximates (protein, fat, carbohydrates), fiber and phytate. In **addition**, vitamins thiamin, **riboflavin**, **niacin** , B-6, B-12, pantothenic acid, folic acid and biotin were also assayed in

these composites. (C) 2000 Elsevier Science B.V. All rights reserved.

L33 ANSWER 9 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB Concentrations of several B-group vitamins, determined by highperformance liquid chromatography (HPLG), and minerals, determined by inductively coupled plasma atomic emission spectroscopy (ICP-AES) in soybeans during different kinema production stages were compared. After soaking soybeans in water, thiamine (B-1) content decreased, whereas **riboflavin** (B-2) content remained unchanged. Cooking had no influence on the B-1 content, but It enhanced the level of B-2 and **niacin** (B-3). Incubation of beans at 37 degrees C for 48 h, when **mixed** with Bacillus subtilis, caused an **increase** in concentration of both B, and B-2. Vitamin B-1 levels decreased when either Enterococcus faecium accompanied B subtilis or the temperature was elevated for 18 h fermentation. Traditionally prepared kinema contained 8 mg B-1, 12 mg B-2, 45 mg B-3, 683 mg Ca, 4 mg Cu, 18 mg Fe, 494 mg Mg, 10 mg Mn, 1257 mg P, 2077 mg K, 13 mg Zn and <0.5 mg of Cd, Cr, Pb, Ni and Na per kg dry matter. While the vitamin B, content was significantly ($P < 0.05$) higher, the contents of vitamins B, and Eb, were significantly ($P < 0.05$) lower in raw soybeans than those in kinema. Mineral concentrations were 3.1-8.3 times higher in raw soybeans than in kinema. (C) 1998 Society of Chemical Industry.

L33 ANSWER 10 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB Precooked corn flour (PCF), made from the clean endosperm of the kernel, is a Venezuelan staple and is used mainly for the preparation of arepa, a popular type of bread. PCF is responsible for 15% of the total caloric intake of the diet and wheat flour (WF) for about 10%. Average consumption for 1990-1996 for PCF and WF in the strata III-IV-V was 97.5 and 26.1 g/ person/day respectively. Since 1993 PCF is enriched (mg/kg): thiamin 3.1; **riboflavin** 2.5; **niacin** 51; iron 50; vitamin A 2700 ER an WF thiamin 1.5, **riboflavin** 2; **niacin** 20; iron 20. Analysis of control samples of PCF and WF showed that in general, the industry comply with the mandatory nutritional profile. Based on the average intake (Food Consumption Surveys) for both flours in the strata III-IV-V, in 1992 and 1995, that is, before and after the nutritional decree, the percentages of Venezuelan Daily Dietetic Recommendations (DDR) provided by these intakes were calculated. These results were for 1992: thiamin 7% **riboflavin** 4%, **niacin** 4%, iron 8%, and vitamin A 0%. For 1995: thiamin 35%; **riboflavin** 19%; **niacin** 33%, iron 44%, and vitamin A 33%. Iron deficiency determined by measuring the serum ferritin concentration and the prevalence of anemia were reduced from 37% and 19%, respectively in in 1992 to 15% and 10% in 1994. No other intervention program took place in that time. Considering the average consumption of corn and wheat flour, the cost per kg of the vitamin-iron pre-**mix** and the amount to be **added** per MT of PCF and WF, the cost of the nutritional program for these flours is about US$ 0.11 per person per year. Some important points derived from the Venezuelan experience are pointed out.

L33 ANSWER 11 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB Lentils (Lens culinaris, var. vulgaris cultivar Magda-20) were naturally fermented or 96 h at different lentil flour concentrations (79, 150 and 221 g/l) and temperatures (28, 35 and 42 degrees C). During fermentation, samples were taken at 24-h intervals and the changes in thiamin (vitamin B-1), **riboflavin** (vitamin B-2) and total and available **niacin** (vitamin Bg) Were investigated. Preparation of the lentil flour suspension to be fermented (i.e. the process of **mixing** the flour and sterilized tap wafer) caused an **increase** of the available **niacin** content in all batches, while changes in thiamin and **riboflavin** content were related to the conditions in which the preparation of the suspensions was carried our. The whole natural fermentation process (from the raw state to after 96 h of fermentation),, either did not affect or produced a slight

decrease in the thiamin content of lentils. In contrast, **riboflavin**, available **niacin** and total **niacin** contents **increased** throughout the 96 h period, which ended with a 35-82% **increase** of **riboflavin**, a 24-91% **increase** of available **niacin** and a 20-58% **Increase** of total **niacin**, The temperature during the fermentation procedure had significant efficient on the levels of thiamin and **riboflavin** in fermented lentils. To obtain lentil flours with an **improved** amount of **riboflavin** and available **niacin** with a minimum loss of thiamin, the natural fermentation of lentils should be carried out for 96 h at 42 degrees C and with a lentil flour concentration of 221 g/l.

L33 ANSWER 12 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB The ion-pair liquid-chromatographic separation of the water-soluble vitamins thiamine mononitrate, **riboflavin** phosphate, **nicotinamide**, pyridoxine hydrochloride, ascorbic acid, saccharin, and the dye Sunset Yellow FCF (E110) has been examined for the analysis of the compounds in effervescent tablets. A Draper-Lin small composite design was used to study the impact on the compounds' retention times and peak-widths (the response variables) of four different mobile phase variables: percentage of methanol as organic modifier, the concentrations of hexanesulfonate as ion pairing reagent and of triethanolamine as competitive base, and pH. The interactions of these variables were also studied. The proposed design enabled derivation of multiple linear regression equations to model each compound's retention time and peak-width at half-height. The statistical reliability of the regression models was established by comparing predicted and experimental values. By introducing the regression models into a spreadsheet program (Excel 5.0), retention times and peak-widths for each compound were calculated at fixed mobile phase pH. The values of all the other **combinations** of the three mobile phase variables were changed in increments of two units within their examined boundaries, resulting in 225 different rows. For each **combination** the compounds' calculated retention times and their corresponding peak-widths were sorted in **increasing** order and the resolution between successive peaks was calculated. The minimum effective resolution (R-S min) between each pair of peaks and the maximum retention time (t(R) max) in each row were then selected and used to construct contour plots indicating the location of zones of mobile phase parameter **combinations** where R-S min > 1.5 and the analysis was rugged, and where t(R) max values were minimum. Their common regions resulted in optimum chromatographic separations. Examples are shown of chromatographic separations obtained using mobile phase **combinations** which were the best compromise of the three criteria selected.

L33 ANSWER 13 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB A method was developed for the quantitative analysis of six water-soluble vitamins (thiamine, **nicotinamide**, **riboflavine**, pyridoxine, ascorbic acid and pantothenic acid) in a pharmaceutical formulation, using free solution capillary zone electrophoresis (CZE) in uncoated fused silica capillaries and UV detection. The influence of different parameters, such as the nature of the buffer anionic component and buffer concentration on the CZE separation of vitamins was investigated using four vitamins of the B group as model compounds. A good compromise between resolution, analysis time and analyte stability was obtained by use of a 50 mM borax buffer of pH 8.5. This CZE method was found to be very useful for the separation of more complex samples, a **mixture** of ten water-soluble vitamins being completely resolved in about 10 min. However, cyanocobalamine could not be separated from **nicotinamide** in this CZE system, the two compounds being in uncharged form at the pH used. These two compounds could easily be resolved by micellar electrokinetic chromatography (MEKC), the anionic surfactant dodecylsulfate being **added** to the running

buffer at 25 mM concentration. In the pharmaceutical formulation, some excipients were found to be adsorbed to the capillary surface, giving rise to a progressive decrease of the electroosmotic flow and consequently to a simultaneous **increase** of analyte migration times. A capillary wash with sodium hydroxide had to be made between successive runs in order to minimize these effects. Good results with respect to linearity, precision and accuracy were obtained in the concentration range studied for the six vitamins, using **nicotinic** acid as internal standard. (C) 1997 Eisevier Science B.V.

L33 ANSWER 14 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB Tempe fermentations using **mixed** cultures of Rhizopus oligosporus MS5, R. oryzne EN, Citrobacter freundii, and Brevibacterium epidermidis were investigated. Consumption of 150 g tempe, produced with a pure fungal **mixed** culture out of strains MS5 and EN, is sufficient to cover the daily requirements of **niacin**, vitamin K, ergosterol, and tocopherol as well as half of the daily requirement of pyridoxine, **riboflavin**, and biotin. Moreover, one-fourth of the recommended amount of folate is supplied. Supplementation of the fungal inoculum with C. freundii results in tempe enriched with vitamin B-12. Menachinone was produced as a typical bacterial vitamin K derivative. Metabolic activity of C. frendii led to an **additional** decrease of the alpha-galactosides stachyose and raffinose compared to pure fungal fermentations. No bacterial formation of factor 2 could be observed.

L33 ANSWER 15 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB Soluble fractions prepared from the mycelia of wild type (74-OR23-1A) and band (bd) exhibited an **increase** in the rate of the ADP ribosylation of a 38 kDa protein from **nicotinamide** adenine [P-32] dinucleotide ([P-32] NAD) in the presence of 10(-7) M **riboflavin** caused by blue light irradiation in vitro. The soluble fraction was **mixed** with a reaction **mixture** containing 5 mu Ci [P-32]NAD at 0 degrees C for 20 s and then it was irradiated with blue light (420 nm, 42 mu mol m(-2) s(-1)) for 12.5, 25, 50, 100, 200 or 400 s at 0 degrees C or for 100 s with photon irradiance of 0.42, 4.2, 6.4 or 42 mu mol m(-2) s(-1). Immediately after irradiation, the reaction was stopped and analysed by sodium dodecyl sulphate-polyacrylamide gel electrophoresis. An **increase** in the ADP ribosylation of the 38 kDa protein could be detected within 100 s of irradiation, and the enhancement in the rate of ADP ribosylation of the 38 kDa protein was proportional to the **increase** in the photon irradiance. By the irradiation with blue light for 200 or 400 s, the ADP ribosylation of a 56 kDa protein could also be detected. Analysis by two-dimensional gel electrophoresis of proteins after ADP ribosylation of them revealed that the 38 kDa proteins displayed at least four radioactive protein spots and the 56 kDa protein a single radioactive protein spot. Soluble fractions of mycelia prepared from blind mutants wc-1, wc-2, Delta ps15-1, lis-1, lis-2 and Iis-3 exhibited also the enhancement of the ADP ribosylation of the 38 kDa protein by blue light irradiation, and at least wc-1, Delta ps15-1, lis-1 and lis-2 displayed a similar blue light response in the 56 kDa protein.

L33 ANSWER 16 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB To determine the nutritional changes of grass prawns during ionizing radiation processing, the effects of irradiation doses, irradiation temperatures and the **combined** treatment of irradiation and cooking on thiamine, **riboflavin** and **niacin** contents of grass prawns were studied. Grass prawns were irradiated with different doses at refrigerated (4 degrees C) or frozen (-20 degrees C) temperatures. A domestic cooking procedure then followed irradiation. Our results indicate that radiation and post-irradiation cooking result in different changes in the vitamin contents. The loss of thiamine **increased** with the **increase** of irradiation doses and temperatures. In contrast, no significant changes were observed in either

riboflavin or **niacin** even after irradiation doses were administered up to 7 kGy at 4 or -20 degrees C. Moreover, significant destruction of thiamine occurred and there was no change in **riboflavin** or **niacin** after post-irradiation cooking. The total loss of thiamine after the **combined** treatments appears to be simply the sum of the individual losses produced by the two treatments respectively. (C) 1996 Elsevier Science Ltd.

L33 ANSWER 17 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB An in vitro assay system of the blue light effect on the phosphorylation of proteins in the crude membrane fraction prepared from the third internodes of etiolated pea (Pisum sativum Alaska) seedlings was established. The reaction **mixture** containing the crude membrane fraction and adenosine 5'-[gamma-P-32]triphosphate ([gamma-P-32]ATP) at 4X10(-8) M was irradiated by blue light (465 nm, 6 mu mol m(-2) s(-1)) for 1, 10 and 100 s at 0 degrees C, after which the reaction was immediately stopped. The dephosphorylation of the 15 kDa proteins was stimulated in the presence of diphtheria toxin in darkness. Blue light irradiation suppressed the effect of the toxin, resulting in a higher level of phosphorylation in the 15 kDa protein than that in darkness. Blue light stimulated the phosphorylation of a 70 kDa protein. WA irradiation (355 nm, 6 mu mol m(-2) s(-1)) slightly enhanced the phospholylation of the 70 kDa protein. The blue light effect of retarding the dephosphorylation of 15 kDa proteins could also be detected in the presence of both **riboflavin** at 10(-7)-10(-6) M and diphtheria toxin. In the absence of diphtheria toxin and in the presence of 10(-5) M **nicotineamide** adenine dinucleotide (NAD) and 10(-7) M **riboflavin**, blue light prevented the dephosphorylation of the proteins. The 15 kDa proteins in **addition** to a 18 kDa protein rapidly phosphorylated at 0 degrees C for 7 s by [gamma-P-32]ATP at 4X10(-8) M could be dephosphorylated by the **addition** of ATP and guanosine 5'-triphosphate (GTP) at 10(-5) M or adenosine 5'-diphosphate (ADP) or guanosine 5'-diphosphate (GDP) at 10(-6) M at 0 degrees C for 5 s.

L33 ANSWER 18 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB A potential mechanism of neuronal injury in neurodegenerative diseases is a defect in energy metabolism that may lead to slow excitotoxic neuronal death. Consistent with this possibility, we showed that specific inhibitors of the electron transport chain produce excitotoxic lesions in vivo. In the present study we examined whether agents that **improve** energy metabolism can block lesions produced by the mitochondrial toxin malonate. Striatal lesions produced by the complex II inhibitor malonate were blocked in a dose-dependent manner by oral pretreatment with coenzyme Q(10). Administration of **nicotinamide** by Alzet pump for 1 week attenuated malonate-induced lesions, but **riboflavin** had no effect. Administration of **nicotinamide** intraperitoneally just prior to and following induction of the lesions produced dose-dependent neuroprotection. A **combination** of coenzyme Q(10) with **nicotinamide** was more effective than either compound alone, as shown by both lesion size and magnetic resonance imaging in vivo. Both coenzyme Q(10) and **nicotinamide** blocked adenosine triphosphate depletions and lactate **increases**. These results confirm that mitochondrial toxins produce striatal excitotoxic lesions by a mechanism involving energy depletion in vivo. Furthermore, they suggest novel neuroprotective strategies that may be useful in the treatment of both mitochondrial encephalopathies and neurodegenerative diseases.

L33 ANSWER 19 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB A randomized nutrition intervention trial was conducted among 29,584 adult residents of Linxian, China, to examine the effects of vitamin/mineral supplementation on the occurrence of esophageal/gastric cardia cancer in this high-risk population. A fractional factorial study design allowed evaluations of four different **combinations** of nutrients: (A) retinol and zinc; (B) **riboflavin** and

niacin; (C) vitamin C and molybdenum; and (D) beta-carotene, vitamin E, and selenium. During the 5.25-year intervention, significant reductions in total mortality, total cancer mortality, and stomach cancer mortality occurred among those receiving beta-carotene, vitamin E, and selenium. At the end of intervention, an endoscopic survey was carried out in a sample of subjects to see if the nutritional supplements had affected the prevalence of clinically silent precancerous lesions and early invasive cancers of the esophagus or stomach. Endoscopy was performed on 391 individuals from two study villages. The prevalences of esophageal and gastric dysplasia and cancer were compared by nutrient factor. Cancer or dysplasia was diagnosed in 15% of the participants. No statistically significant reductions in the prevalence of esophageal or gastric dysplasia or cancer were seen for any of the four vitamin/mineral **combinations**. The greatest reduction in risk (odds ratio, 0.38; P = 0.09) was seen for the effect of retinol and zinc on the prevalence of gastric cancer. Although no significant protective effects were seen in this endoscopic survey, there was a suggestion that supplementation with retinol and zinc may protect against the development of gastric neoplasia in this high-risk population. **Additional** studies with larger numbers of endpoints will be needed to further evaluate this possibility.

L33 ANSWER 20 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB In Linxian China, the esophageal/gastric cardia cancer mortality rates are among the highest in the world. There is suspicion that the population's chronic deficiencies of multiple micronutrients are etiologically involved. We conducted two randomized, placebo-controlled nutrition intervention trials to test the effects of vitamin and mineral supplements in lowering the rates of esophageal/gastric cancer. In the first trial, the dysplasia trial, 3318 adults with a cytological diagnosis of esophageal dysplasia received daily supplementation with 26 vitamins and minerals in doses typically 2-3 times the United States Recommended Daily Allowances, or placebos, for 6 years. The second trial, the general population trial, involved 29,584 adults and used a one-half replicate of a 2(4) factorial experimental design which tested the effects of four **combinations** of nutrients: A, retinol and zinc; B, **riboflavin** and **niacin**; C, vitamin C and molybdenum; and D, beta-carotene, vitamin E, and selenium. Doses for these daily supplements ranged from 1 to 2 times the United States Recommended Daily Allowances, and the different vitamin/mineral **combinations** or placebos were taken for a period of 5.25 years. As part of the general population trial, and end-of-intervention endoscopy survey was carried out in a small (1.3%) sample of subjects to see if supplementation affected the prevalence of dysplasia and early cancer. Herein we review the methods of these trials and the results of the endoscopic survey. Fifteen esophageal and 16 gastric cancers were identified in endoscopic biopsies from the 391 subjects evaluated from two villages, and nearly all were asymptomatic. No significant reductions in the prevalence of esophageal or gastric dysplasia or cancer were seen with any of the four supplement groups. However, the prevalence of gastric cancer among participants receiving retinol and zinc was 62% lower than those not receiving those supplements (P = 0.09), while participants receiving beta-carotene, vitamin E, and selenium had a 42% reduction in esophageal cancer prevalence (0.34). We have reported separately that cancer mortality over the entire 5.25-year period was significantly reduced among those receiving beta-carotene, vitamin E, and selenium. The findings from the overall trial and the endoscopic sample offer a hopeful sign and should encourage **additional** studies with these agents in larger numbers of subjects.

L33 ANSWER 21 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB Data files of the food intakes of 2705 schoolchildren surveyed in 1983 (DoH, 1989a) were reanalysed to provide an estimate of the total intake of sugars and major sources of sugars in the diet. The relationships between intake of sugars, nutrients and nutrient density were examined by

comparing between tertiles, firstly of total sugars (g/day) and subsequently of percentage energy from sugars. The results are presented separately for boys and girls in two age-groups (10-11 years and 14-15 years). The estimated mean intake of sugars (123 g/day, s.d. 42 g) was equivalent to 23% of dietary energy. Major sources were confectionery (18%), table sugar (16%), cakes and biscuits (13%), milk (10%), soft drinks (9%) and puddings (9%).

Nutrient intakes were not significantly lower, and indeed were often higher, in those groups consuming most sugars, by either method of defining tertiles. Energy intake appeared to be the major influence on intakes of nutrients. Nutrient densities (mg or mug/MJ) showed different trends: vitamin A, vitamin C and thiamin concentrations were similar across all tertiles, while those for calcium and **riboflavin** tended to rise with **increasing** sugars intake and those for iron and **nicotinic** acid tended to fall, although not all of these differences were significant in all age/sex groups at the 1% level. There was a significant reciprocal (inverse) relationship between sugars and percentage energy from fat. Iron intakes were low in girls, irrespective of consumption of sugars. These data therefore provide little support for the 'empty calorie' hypothesis. Schoolchildren with low energy intakes in **combination** with high proportional intakes of sugar may constitute a theoretical at-risk group, particularly with regard to iron intake. However, because the possibility cannot be excluded that habitual food intake may be underrepresented in dietary records, further investigation of such groups by methods incorporating clinical/biochemical assessments are warranted.

L33 ANSWER 22 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB Vitamin requirements of Chrysopa septempunctata were investigated using chemically-defined diets. A vitamin **mixture** containing 17 vitamins sustained larval development. When all the vitamins were removed from the diet, all larvae died in several days. An **increase** in the amount of vitamins in the **mixture** did not **improve** development. Choline chloride, **nicotinic** acid and Ca-pantothenate are essential for larval development. Omission of thiamine, **riboflavin** and folic acid also reduced the emergence ratio and prolonged the developmental period in the first generation. The requirements for other water-soluble vitamins are relatively low but some deterioration appeared in successive generations. No necessity for fat-soluble vitamins was observed over three generations. Further effects of carotenoid deficiency on photoperiodic induction of diapause were not recognized in several generations.

L33 ANSWER 23 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB Reichstein's compound S was successfully converted to prednisolone in a single-step fermentation using a **mixed** culture of Curvularia lunata and Mycobacterium smegmatis. Introducing **additional** medium at the time of bacterial inoculation and **increasing** the M. smegmatis inoculum to 8% were necessary for maximal dehydrogenation of cortisol to prednisolone (86%). However, beef extract, corn-steep solids, and malt extract were inhibitory to the dehydrogenase activity and stimulatory to hydroxylase. Of the vitamins tested, **nicotinic** acid and **riboflavin** at 0.2 and 1.13 mg/L, respectively, resulted in maximum transformation of Reichstein's compound S (100%) and optimized prednisolone yields (92%) in the **mixed** culture. The trace elements present in the medium were sufficient for maximal transformation, and there was no need for an exogenous supply. **Addition** of ATP, sodium acetate, and NAD inhibited the dehydrogenation reaction.

L33 ANSWER 24 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB Psittacines are often classified as seed eaters despite studies that have established great diversity in food habits in the wild. While seeds are consumed, so are flowers, buds, leaves, fruits and cambium. Some psittacines consume parts of > 80 species of grasses, forbs, shrubs and

trees. In **addition**, insects may be important. Although there are few controlled studies of the requirements of psittacines, it is probable that most nutrient needs are comparable to those of domesticated Precocial birds that have been thoroughly studied. Commercial seed **mixes** for psittacines commonly contain com, sunflower, safflower, pumpkin and squash seeds, wheat, peanuts, millet, oat groats and buckwheat, although other seeds may be present. Because hulls/shells comprise 18-69% of these seeds and they are removed before swallowing, a significant proportion of typical seed **mixtures** is waste. Some of the seeds also are very high in fat and promote obesity. Common nutrient deficiencies of decorticated seeds include lysine, calcium, available phosphorus, sodium, manganese, zinc, iron, iodine, selenium, vitamins A, D, E and K, **riboflavin**, pantothenic acid, available **niacin**, vitamin B-12 and choline. Attempts to correct these deficiencies by incorporating pellets into seed **mixes** are usually thwarted by rejection of the pellets and disproportionate consumption of items that are more highly favored. An extruded diet formulated to meet the projected nutrient needs of psittacines was fed with fruits and vegetables to eight species of psittacines for 1 y. Fledging percentage was **increased** to 90% from the 66% observed during the previous 2 y when these psittacines were fed seeds, fruits and vegetables. Although this extruded diet was well accepted in a **mixture** of fruits and vegetables and met nutrient needs, analyses have shown that not all commercial formulated diets are of equal merit.

L33 ANSWER 25 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB The Lens Opacities Case-Control Study evaluated risk factors for age-related nuclear, cortical, posterior subcapsular, and **mixed** cataracts. The 1380 participants were ophthalmology outpatients, aged 40 to 79 years, classified into the following groups: posterior subcapsular only, 72 patients; nuclear only, 137 patients; cortical only, 290 patients; **mixed** cataract, 446 patients; and controls, 435 patients. In polychotomous logistic regression analyses, low education **increased** risk (odds ratio [OR] = 1.46) and regular use of multivitamin supplements decreased risk (OR = 0.63) for all cataract types. Dietary intake of **riboflavin**, vitamins C, E, and carotene, which have antioxidant potential, was protective for cortical, nuclear, and **mixed** cataract; intake of **niacin**, thiamine, and iron also decreased risk. Similar results were found in analyses that **combined** the antioxidant vitamins (OR = 0.40) or considered the individual nutrients (OR = 0.48 to 0.56). Diabetes **increased** risk of posterior subcapsular, cortical, and **mixed** cataracts (OR = 1.56). Oral steroid therapy **increased** posterior subcapsular cataract risk (OR = 5.83). Females (OR = 1.51) and nonwhites (OR = 2.03) were at **increased** risk only for cortical cataract. Risk factors for nuclear cataract were a nonprofessional occupation (OR = 1.96), current smoking (OR = 1.68), body mass index (OR = 0.76), and occupational exposure to sunlight (OR = 0.61). Gout medications (OR = 2.48), family history (OR = 1.52), and use of eyeglasses by age 20 years, which is an indicator of myopia (OR = 1.44), **increased** risk of **mixed** cataract. The results support a role for the nutritional, medical, personal, and other factors in cataractogenesis. The potentially modifiable factors suggested by this study merit further evaluation.

L33 ANSWER 26 OF 26 SCISEARCH COPYRIGHT 2003 THOMSON ISI

AB pH-dependence of initial (**admixtural**) adenosine triphosphate (ATP) changes (ATP synthesis and hydrolysis) was studied for aerated and desaerated aqueous solutions during the incubation of adenosine diphosphate (ADP) and inorganic phosphate (Pi) in the presence of reduced **nicotinamide** adenine dinucleotide (NADH) and **riboflavin** (Rf). The preferential pH regions were indicated both for ATP synthesis and ATP hydrolysis (pH < pH 5.4, 5.9 divided-by pH 6.5 and pH > 6.6, pH 5.5 divided-by 5.8 respectively). Free radical content measurements were

paralleled by ESR technique. On the basis of the obtained results it was assumed that a part of ESP signal attributed to ADP radicals was **increased** during ATP synthesis.

=>
Connection closed by remote host

```
=> s nicotinic or nicotinamide or (vitamin B3) or niacin or (vitamin pp)
L1       15987 NICOTINIC OR NICOTINAMIDE OR (VITAMIN B3) OR NIACIN OR (VITAMIN
               PP)

=> s nicotinic or nicotinamide or  niacin or (vitamin pp)
L2       15947 NICOTINIC OR NICOTINAMIDE OR  NIACIN OR (VITAMIN PP)

=> s l2/clm
L3        2037 (NICOTINIC/CLM OR NICOTINAMIDE/CLM OR  NIACIN/CLM OR (VITAMIN
               PP/CLM))

=> s mixture (1s) l3
L4         268 MIXTURE (1S) L3

=> s rivoflavin? or (vitamine b2)
L5          11 RIVOFLAVIN? OR (VITAMINE B2)

=> s riboflavin? or (vitamin b2)
L6        5706 RIBOFLAVIN? OR (VITAMIN B2)

=> s l4 (1s) l6
L7          42 L4 (1S) L6

=> d 1-42 hit, pi
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     FILE 'USPATFULL' ENTERED AT 13:22:29 ON 16 MAY 2003
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L2         15947 S NICOTINIC OR NICOTINAMIDE OR  NIACIN OR (VITAMIN PP)
L3          2037 S L2/CLM
L4           268 S MIXTURE (1S) L3
L5            11 S RIVOFLAVIN? OR (VITAMINE B2)
L6          5706 S RIBOFLAVIN? OR (VITAMIN B2)
L7            42 S L4 (1S) L6

=> s l2/ab
L8           636 (NICOTINIC/AB OR NICOTINAMIDE/AB OR  NIACIN/AB OR (VITAMIN PP/AB
                 ))

=> s l8 and l3
L9           492 L8 AND L3

=> s l2/ti
L10          211 (NICOTINIC/TI OR NICOTINAMIDE/TI OR  NIACIN/TI OR (VITAMIN PP/TI
                 ))

=> s l10 and l9
L11          145 L10 AND L9

=> s l11 (1s) l6
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L11 (1S) L6'
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=> s l11 and l6/clm
L13            0 L11 AND (RIBOFLAVIN?/CLM OR (VITAMIN B2/CLM))

=> s l11 and (l2 (1s) l6 (1s) select?)
L14            0 L11 AND (L2 (1S) L6 (1S) SELECT?)

=> s l11 and ( l6 (1s) select?)
L15            0 L11 AND ( L6 (1S) SELECT?)

=> s l11 and  l6
L16            0 L11 AND  L6

=> s l11
L17          145 L10 AND L9

=> s l17 and l6
L18            0 L17 AND L6

=> s l9 and (l2 (1s) l6 (1s) select?)
L19            5 L9 AND (L2 (1S) L6 (1S) SELECT?)

=> d 1-5 hit, pi
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